THE PROBLEM OF THE IDEAL

David Dubrovsky

T[illegible] is an investigation of the ide[illegible] central categories in Marxist philosophy.

The author deals at length with the epistemological, ontological, axiological and praxiological aspects of this category, analyses its relation to such notions as consciousness, mind, reflection and others, drawing for this purpose on the results of contemporary research. Extensive coverage is given to the socio-cultural aspect of the problem of the ideal.

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David Dubrovsky

THE PROBLEM OF THE IDEAL

The Nature of Mind and Its Relationship to the Brain and Social Medium

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Socialist Republics

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INTRODUCTION

The problem of the ideal has always been the pivot of philosophical knowledge and the main scene of theoretical struggle between materialism and idealism.

From the standpoint of logic the category of the ideal is directly linked with that of the material, and this alone is bound to make it crucial in materialist philosophy. The content of the category of the ideal is determined by the way dialectical materialism solves the basic question of philosophy. The ideal does not exist by itself, it is of necessity related to the material as its reflection, as kind of a mental projection objectified by man through his practical activity. Representing the essential characteristic of consciousness, creative spirit and practical activity of a social individual, the ideal has a world-view character and performs methodological functions. Their theoretical analysis is an important prerequisite not only for philosophical research, but also for inquiries into a broad range of concrete scientific problems.

The investigation of the problem of the ideal is bound up with the solution of a number of key problems in dialectical and historical materialism, ethics, aesthetics and scientific atheism. In turn, progress in various fields of philosophical knowledge largely depends on the results of research into the problem of the ideal which entails serious theoretical difficulties.

The complex character of the problem of the ideal, multifaceted as it is, presupposes interdependence of its different aspects and its study as an integral whole. Presumably, there are two principal areas of research into the nature of the ideal which appear to have very little relevance to each other. One of them mainly covers the questions of dialectical materialism connected with the understanding of consciousness as a function of the highly developed organic matter and as the highest form of reflection. Here attention is focused on the classic problems of the relationship between the spiritual and the material, consciousness and brain processes, the genesis of the mental, and the interrelation of thought and language. Their solution calls for the explanation of the essence of the ideal in epistemological and ontological terms on the basis of general scientific knowledge and also data provided by psychology, psychiatry and contiguous disciplines. It is along these lines that the problem of the ideal has been investigated by a number of Marxist philosophers (particularly, by V. S. Tyukhtin, V. N. Sagatovsky and S. Petrov).*

The other area of research is mainly confined to the questions of historical materialism. They are connected, first and foremost, with the explanation of nature and functions of social consciousness, cultural values and spiritual production. In this field the ideal is treated in terms of social practice, the dialectic of objectification and deobjectification. This was the line followed by E. V. Ilyenkov,[2] V. S. Barulin[3] and other researchers.

It stands to reason that the two indicated areas of investigation into the problem of the ideal do not by any means encompass all its aspects. Besides, their delimitation is largely conventional, its purpose being to highlight the difference of the two traditional approaches to the problem of the ideal as they exist in Soviet literature—one of them oriented predominantly on natural sciences, and the other, on humanities. This situation is indicative of a certain general estrangement between the notions of natural and social sciences which has resulted in a heterogeneity of theoretical principles underlying the two approaches to the problem in interest.

Actually, however, the natural-scientific and socio-cultural aspects of the problem of the ideal are essentially interdependent and the achievement of conceptual unity in their study is hampered, among other things, by the old dichotomy of the biological (natural) and the social. To be sure, such dichotomy remains valid in the study of many theoretical problems, for instance, in the correlation between social life and the life of plants and animals, the social traits of an individual and his genetic peculiarities, etc. but it becomes senseless in the approach to a great number of other theoretical problems which are advanced by the latest achievements of science and centre upon man, his consciousness and activity. For instance, proceeding from the dichotomy of the biological and the social a researcher must treat a new artistic idea produced by a poet (and objectified by him in writing) as a social phenomenon, viewing the brain neurodynamic equivalent of this idea, as well as the neurosomatic mechanism of the process of speech formation as biological (natural) phenomena. Yet such dichotomy would be absolutely unwarrantable since both the artistic idea and its neurodynamic equivalent are inseparable in time. They make a single information process which cannot be split into two phenomena. Despite the fact that the brain neurodynamic equivalent ought to be described in the language of natural science, it is no less social by nature than the corresponding idea described in the language of social science. In like manner, a chain of motor acts instrumental in the objectification of an idea can be described in principle in the language of psychophysiology, but this in no way deprives it of its essentially social nature.

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* This also applies to my earlier works since my interests were largely centred upon the problem of

The reason for our short digression into methodological questions of the unification of categorial structures developed by social and natural sciences is merely to emphasise the need for an integrated approach to the problem of the ideal, i.e., first and foremost, for a conceptual unity of its "natural" and socio-cultural aspects. Such a unity appears to be absolutely indispensable for a harmonious, integrated conception of the ideal. Other important requisites for success in investigation into the problem in interest consist in due regard for the dialectical unity of such aspects of the ideal as social-normative and personal-existential, reflective-reproductive and creative-constitutive, truth-oriented and axiological, conceptual and formal (structural).

Lastly, theoretical analysis of all the principal aspects of the problem of the ideal presupposes broad use of the latest scientific achievements, particularly in such fields as psychology, psychiatry, neurophysiology, cybernetics, semeiology, and of course, humanities, which calls for research into the methods of and limits to the interpretation of the category of the ideal with the help of special and general scientific categories.

To be sure, one would be wise to avoid the two extremes which can sometimes be met with in relevant literature: on the one hand, the underestimation of the specificity of philosophical knowledge not infrequently leading to the confusion of philosophical categories with general scientific notions and resulting in the oversimplification of philosophical problems; on the other hand, the divorce between philosophical categories and both general and special scientific notions resulting in a denial of the very possibility, let alone usefulness, of interpreting philosophical concepts in terms of natural science. In relation to the problem of the ideal the latter extreme springs from the conviction that the results of concrete scientific investigations do not carry any weight with philosophical research and have no stimulating or corrective influence on the growth of philosophical knowledge. Such a view can hardly be regarded as tenable as it tends to fix a gulf between philosophy, on the one hand, and science and social practice, on the other hand, and leads to nothing but scholasticism.

General scientific and metascientific concepts serve as an important intermediary between philosophical categories and special scientific notions. Such concepts provide a link whereby philosophy as a special type of world-view exercises methodological and euristic influence on concrete scientific investigations and is in turn affected by their results. For this reason general scientific concepts can be used for interpretation (and, consequently, for specification) of philosophical categories which, in turn, adds to their methodological value in modern science. The above is fully applicable to the category of the ideal which sometimes readily lends itself to interpretation through the notion of information. Such interpretation, as we have earlier tried to show,[4] makes it possible to get a better insight into one of the aspects of the multifaceted category of the ideal without detracting from its philosophical specificity, thereby enhancing its instrumental value in the investigation of the "mind-brain" problem.

It is our view that such interpretation will also be helpful in the analysis of social consciousness, social activity, the specificity of being and the role of cultural values. General scientific notions and concepts are notable for high integrative potential wherefore their use in studying the problem of the ideal not only makes it possible to profit by the achievements of special sciences, but also provides a basis for an integrated approach to this fundamental philosophical issue.

This monograph represents an attempt at such an integrated approach. Put another way, it makes out a case for the ideal as a unitary whole of its principal aspects related to both dialectical and historical materialism.

NOTES TO INTRODUCTION

[1] D. I. Dubrovsky, "On the Nature of the Ideal", *Voprosy filosofii,* 1971, No. 4; idem, *Psychic Phenomena and the Brain,* Moscow, 1971; idem, *Information, Consciousness, Brain,* Moscow, 1980 (all in Russian).

[2] E. V. Ilyenkov, "The Ideal", in: *Encyclopedia of Philosophy,* Vol. 2, Moscow, 1962; idem, "The Problem of the Ideal", *Voprosy filosofii,* 1979, Nos. 6 and 7.

[3] V. S. Barulin, *The Relation of the Material and the Ideal in Society as a Problem of Historical Materialism,* Barnaul, 1970; idem, "Notes on Principles of Reflection of Reality in Categories of Social Being and Social Consciousness", in: *Social Consciousness (Some Theoretical Problems),* Barnaul, 1975; idem, "The Role of Categories of Social Being and Social Consciousness in the System of Categories of Historical Materialism", in *Methodological Problems of Historical Materialism,* Barnaul, 1976; idem, *The Correlation of the Material and the Ideal in Society,* Moscow, 1977 (all in Russian).

[4] D. I. Dubrovsky, *Information, Consciousness, Brain,* Part 2.

PART ONE.

THE IDEAL AS SUBJECTIVE REALITY

Chapter 1.

General Characteristics of the Problem of the Ideal

1. The Category of the Ideal in the System of Philosophical Knowledge

The crucial importance of the category of the ideal is predetermined by the basic question of philosophy which counterposes and relates matter and consciousness, the material and the ideal, being and thinking. The category of the ideal is inseparable from the basic question of philosophy, its statement and solution.

This at once brings us to the problem of the relationship between the concepts of matter, the material, being, on the one hand, and those of consciousness, the ideal, and thinking, on the other. Can we reduce the three pairs of concepts to one pair? What are the distinguishing features of the category of the ideal as compared, for instance, with the category of consciousness?

Laying aside, for the time being, a detailed analysis of these questions, we shall confine ourselves here to a few preliminary considerations. The basic question of philosophy, despite all its diverse wordings, boils down to what we acknowledge as having primacy: matter or consciousness, thinking or being, spirit or nature, the material or the ideal.[1] Implicitly or explicitly, it is the corner-stone of all philosophical systems, teachings and conceptions, numerous and diverse as they are. The solution of the basic philosophical question predetermines the nature of the problems they concentrate upon and accounts for their other specific features. What is usually called philosophy pertains to the entire range of historically known philosophical theories and doctrines in all their diversity, continuity of ideas, distinctions and contrarieties, yet the fundamental epistemological problem of what is to be regarded as primary and what as secondary remains pivotal to all of them and serves as the main criterion in assessing any philosophical trend.

The content of concepts "being", "matter", "consciousness", "the ideal" is very different with different philosophical trends (teachings, conceptions), yet it is sufficiently invariant to permit their exponents to distinguish between what relates to consciousness and what to matter. Highly abstract though it may be, this invariance is tangible enough for representatives of different philosophical trends to understand the meaning of the basic question of philosophy. In other words, this question formulated by Frederick Engels *is clear* not only to the materialists, but also to the advocates of various idealistic theories. To be sure, they may reject it as meaningless or question the need to answer it in clear terms, but in fact their way of thinking leads them to one of the two highroads and they are bound to make their choice which is not infrequently disguised under specific terminology.

The specific content of the categories of matter and consciousness is only determined in the context of this or that philosophical trend *after* the solution of the basic question of philosophy, and then within the pattern of a specific teaching which falls in with the general line of the given philosophic tradition. Indeed, the content of the category of the ideal in the Hegelian system is very different from that in Marxist philosophy.

Of course, one cannot deny the presence of certain common elements in the content of one and the same category in different philosophical schools which only attests to the historical continuity of philosophical knowledge. Such commonness is typical only of the most abstract qualities which by themselves cannot represent the specificity of a given basic category.

If such most abstract qualities are not taken into account, we may apparently differentiate between three levels present in the description of philosophical categories: first, the characteristics common to the whole trend, e.g. to materialism; second, specific characteristics typical of and necessary for one or another variety of a given trend or a definite philosophical teaching that has taken shape within its general pattern (e.g. dialectical materialism as a specific, higher form of materialism retaining, however, the general materialist characteristics of basic categories); and third, the specific characteristics developed within the framework of one or another conception which deals with the genesis of a category, its increasingly complex ties with other categories, its methodological functions, etc. Such kind of conceptions remaining within the framework of a given philosophical teaching represent the "buds" of new approaches and solutions which are yet to be tested; only some of them may eventually enter the basic theoretical fund of a given teaching (such new solutions can well be exemplified by different interpretations of the category of the ideal proposed in Marxist literature; their expounders treat this category from the dialectical materialist viewpoint and seek at the same time to specify its content and deepen our understanding of its different aspects).

The delimitation of the above-indicated three levels, schematic though it may be, helps to orient philosophers towards the investigation of the *structure of a category's content* with due regard for its *historical change*. The historicity of categories reveals itself in the continuous enrichment of their content which includes not only a stable core of substance, but also the surrounding pulp of problems, the source of new growth of the substantive core.

The specific content of a category can only be discussed in the context of a definite philosophical system, a concrete living philosophical doctrine. It is my intention to treat the problem in interest from the standpoint of Marxist philosophy and its specific categorial structure.

In the basic question of philosophy focusing on the general, abstract contrariety and relationship of matter and consciousness (which are specified in different departments of philosophical knowledge), the categories of consciousness and the ideal are viewed as synonymous, though their contents are not identical.

The differences between them are only revealed while the materialist solution of the basic question of philosophy is being concretised and grounded. Like many other philosophical categories close in content, consciousness and the ideal cannot be distinguished by extension. The difference between them comes out only as a result of the analysis of their content revealing a lack of coincidence of their logical functions in philosophy's multidimensional domain of sense links. The affinity and even merging of their content in one context gives way to an obvious difference in another context.

The category of the ideal is logically a necessary predicate of "consciousness", though due to the equality of the extensions of these categories "consciousness" may in turn become a predicate of the "ideal". The definition which predicates the ideal of consciousness has a particularly profound meaning in that it focuses attention on all those components of the category of consciousness which express its *logical opposition* to the category of matter and ranks them, as it were, on the same theoretical plane. Owing to the predicate "ideal" the content of the category of consciousness gains a highly important dimension which forms the theoretical foundation for the description, harmonisation and comprehension of spiritual phenomena in man's world with their unique properties, specific mode of existence, qualitative difference from objective reality and the necessary connection with it. The category of the ideal reflects, above all, the specific character of the necessary links between spiritual phenomena and objective reality which are essentially different from the links between material objects.

It would not be wrong to say that the category of consciousness is richer and more complex than that of the ideal. The latter has fewer shades of meaning, as it mainly highlights the specificity, uniqueness of the phenomena of consciousness providing a basis for counterposing them to objective reality. By contrast, the category of consciousness has a number of other aspects reflecting its affinity to or unity with material processes. Such a unity clearly shows up, for instance, in notion "conscious activity" which also covers practical acts and well demonstrates the distinctions between the categories of consciousness and the ideal, the difference of their logical functions. Indeed, one can assert with good reason that practical deeds are *conscious* activity, yet it will not be correct to say that practical activity is *ideal*. It is material activity. In this particular case there is no logical antithesis between the notions of consciousness and material activity which clearly reveals itself between the notions of material activity and the ideal.

This alone shows that the category of the ideal is not a duplicate of the category of consciousness as it performs its own specific logical functions and, as will be shown later, has its own world-view, theoretical and methodological values. The close affinity of these categories, their contiguity does not change this basic fact. True, each category of dialectical materialism reveals its content only through other categories, but this cannot by any means be adduced as an argument in support of the view that a category predicable of another category as one of its aspects is completely absorbed by the latter. The relationship of the categories of consciousness and the ideal is indeed specific due to the great affinity of these categories, yet there is no ground to consider this relationship unique. Similarly, the close affinity of the categories of necessity and law does not mean that one of them should be eliminated.

The category of the ideal is indispensable in all those philosophical contexts where consciousness, the spiritual is logically (in one and the same sense) counterposed to the material. Such is the context of the basic question of philosophy where the notion of consciousness coincides with the notion of the ideal. This logical antithesis represents the essence of the basic philosophical question and is the starting point of a growing system of philosophical knowledge.

Marxist philosophy is a complex dynamic system, a living and developing doctrine. It is subject to constant enrichment and change, and there are no hard and fast lines between its component parts. The processes of internal differentiation and integration attest to the emergence of new problems and reflect the results of their investigation, and this leads not only to local, but to very broad structural transformations inside the edifice of philosophical knowledge affecting the relationships between its historically established departments.

Such departments of Marxist philosophy are dialectical and historical materialism making an organic whole and forming the bed-rock of Marxism-Leninism, ethics, aesthetics, scientific atheism, etc. The questions of their relationships fall beyond the scope of the present work. For our purpose it is important to stress that alongside the firmly established departments there exists, so to speak, a periphery of philosophical knowledge as a whole, and of its separate departments. Lacking a definite shape and affiliation, this periphery nevertheless represents vital links between the departments of philosophy proper and non-philosophical knowledge, primarily different branches of natural science, humanities, mathematical and technical disciplines. Due regard to this specific feature of the structure of philosophical knowledge is of paramount importance for understanding the development of philosophy, its fruitful connection with life, as well as for analysis of the content and functions of philosophical categories, the categories of the material and the ideal inclusive. These questions will subsequently receive detailed consideration in the light of the problem of the ideal.

At this stage we shall only stress that the relationship of the categories of the ideal and the material provides the conceptual framework of the problems located, so to speak, both in the centre and on the fringes of philosophical knowledge, and that therefore the category of the ideal constitutes an indispensable component of the logical structure of any philosophical investigation irrespective of whether the investigator himself is aware of its presence in his reasoning. However, in contrast with some specific research where the category of the ideal is but implicit and need not necessarily come into the limelight, an investigation into fundamental problems of philosophy and a large number of specific problems will hardly be successful unless the category of the ideal is subjected to a special theoretical analysis.

The content of this category only reveals itself vis-à-vis the category of the material wherefore we shall have to consider their relationship first, if only in very general terms.

2. The Material and the Ideal. The Initial Definition of the Category of the Ideal

The contrariety of the categories of the material and the ideal presupposes their *mutual positedness*. The materialist solution of the basic question of philosophy consists in the acknowledgement of matter, the material as primary, and consciousness, the ideal, as secondary. The mutual positedness of these categories reveals itself as their mutual differentiation which makes it possible not only to fix in thought the necessary links between them, but also to avoid their confusion and establish the relative independence of spiritual phenomena and their problems. The study of these problems calls for specific cognitive means largely determined by the methodological functions of the category of the ideal (in its Marxist interpretation).

So, the content of the category of the ideal can only surface when it is compared with the category of the material. Yet in order to do so we must first define the relation between the notions of "matter" and "the material". Are they just different terms denoting one and the same thing, or two different categories? If "matter" and "the material" are different categories, contiguous though as they may be, what are their specific features?

The opinions expressed in relevant literature are far from being unanimous. Some authors hold that "the material" is identical with "matter"[2] as both denote nothing else than objective reality.*

Others view them as two different notions which cannot be identified. By "the material" in that case is understood every property of a material object.[4] Thus I. S. Narsky contends that "materiality and matter are not identical notions".[5] In his opinion, the relationship between these categories is highly dialectical as it expresses the connection between matter and its properties (ibid., pp. 63-65). Such a view ensues from Narsky's general approach to the matter-consciousness antithesis called by him "antinomy-problem". He writes: "Consciousness is material since it is a product of matter, yet it is also ideal, as it is very different from matter which produces it and which is determined through relationship to this product. Matter begets consciousness as its material and immaterial product. *The material is and is not matter*" (italics mine—*D.D.*) (ibid., pp. 33-34).

Indeed, the relationship of fundamental categories is charged, as it were, with antinomies. Overcoming an antinomy is only possible in a concrete philosophical context where each of the opposite categories is interpreted with the help of other categories, and this makes it possible to adopt a definite theoretical solution. Dialectic presupposes the possibility not only of an antinomy, but also of its resolution. In other words, an antinomy should not be allowed to subsist as it is since it represents but the most abstract, starting point of theoretical thought bound to override indeterminacy in one or another concrete sense.

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* An opinion has also been expressed that the terms "matter" and "the material" ("materiality") are different as the latter "is applicable not only to matter as such, but also to all its properties, except consciousness ..."; "the material" denotes all that is inherent in matter "*except its ideal reflection in consciousness*".[3]

Therefore the assertion that "the material is and is not matter" needs to be qualified.

In Narsky's opinion, consciousness is material in the sense that the cause of its ideality, as well as the content reflected in it, is material by nature (ibid., pp. 69 and 70). The general line of his thought is clear: he seeks to underscore the dependence of consciousness on matter, the reflective nature of the former. Yet he leaves open the question regarding the sense in which "the material ... is not matter". This statement in fact amounts to an assertion that the material is not objective reality and, consequently, that the material is the ideal. How are we in that case to distinguish the material from the ideal? Even if we should say that "some material phenomena are ideal" (which binds us also to assert the opposite), we should hardly find grounds for demarcating the above indicated notions. Abstract identification of opposites results in a high degree of indeterminacy which, theoretically speaking, derives from the antithesis of possibility and reality and the conversion of the former into the latter: indeed, the ideal carries the possibility of the material, and vice versa.

The ideal is necessarily connected with the material (matter), but it would hardly be correct to assert that the material is necessarily connected with the ideal. Already at this point we have a sharp logical distinction which is of crucial importance. The ideal is capable of turning into the material, and vice versa (for instance, in the acts of objectification and deobjectification). Yet it gives no reason for the abstract identification of these categories, as the ideal in one and the same sense and in one and the same respect cannot be simultaneously objective reality.

Nor would we clarify the matter by distinguishing the material from objective reality. We believe that there is no logically sound method of distinguishing the terms "matter" and "the material" within the conceptual framework of the basic question of philosophy. It is very important that we never lose sight of the guiding principle: "...the *sole* 'property' of matter with whose recognition philosophical materialism is bound up is the property of *being an objective reality*, of existing outside the mind".[6] The notion of the material therefore covers every object, process, every property, relationship, etc. existing objectively, i.e.

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outside and independent of consciousness. Put another way, the material is synonymous with matter and make one and the same category.

A different viewpoint does not accord with the logical structure of the basic question of philosophy and clouds the category of matter as its clarity can only be retained in opposition to the category of consciousness (the ideal). We fully subscribe to Kopnin's criticism of attempts to define matter "as such, as some substance" and share his view that "the concept of matter is meaningless outside the relationship of being to thinking."[7]

The materialist solution of the basic question of philosophy does not eliminate the logical contrariety of the categories of the material and the ideal. The ideal does not turn into the material just because it is necessarily connected with and determined by it; if it does, it stops being the ideal. Therefore the assertion that the ideal is the material (even if it is qualified as a property of the material) can hardly be accepted as it tends to wash out the demarcation between these categories and creates an illusion that matter or consciousness may have a purely ontological definition.

To be sure, the logical contrariety of the material and the ideal is not absolute and does not rule out their passing into each other through mediating categories. The latter, once found, make it possible to express theoretically the unity of the material and the ideal in human activity, in the research into the mind-brain problem, and in many other respects without eliminating, however, the antithesis of the categories in question. Elaborating on this problem, Lenin wrote: "Of course, even the antithesis of matter and mind has absolute significance only within the bounds of a very limited field—in this case exclusively within the bounds of the fundamental epistemological problem of what is to be regarded as primary and what as secondary. Beyond these bounds *the relative character of this antithesis* is indubitable" (italics mine—*D.D.*).[8] According to Lenin, this antithesis should not be excessive, exaggerated, metaphysical.[9]

Lenin's statements cited above are often adduced as an argument in support of the opinion that the antithesis of matter and consciousness does not obtain outside the bounds of the basic question of philosophy. Reference to Lenin, however, is based on a misinterpretation of his views. Lenin's explicit affirmation of the relative character of the antithesis in question entails two important consequences. First, the categories of the material and the ideal preserve their world-view and methodological functions beyond the bounds of epistemological problems (we shall discuss this question later). Second, all thinkable logical relations of the contrariety of these categories are encompassed by the dialectical unity of the absolute and the relative: in one concrete respect such a contrariety may be absolute, in another, relative. Yet in all cases the logical contrariety of the above-indicated categories obtains in one way or another thus attesting to their interconnection. If the material is objective reality, the ideal cannot be anything else but subjective reality. *The definition of the ideal as subjective reality is the starting point of our investigation and should remain invariable in all contexts where reference is made to the category of the ideal. If this requirement is not observed, the category of the ideal becomes meaningless.*

The classics of Marxism have strongly opposed any attempt to camouflage the logical contrariety of the categories of the material and the ideal, to confound the ideal and the material. Criticising I. Dietzgen, Lenin wrote : "That both thought and matter are 'real', i.e., exist, is true. But to say that thought is material is to make a false step, a step towards confusing materialism and idealism."[10] "That the conception of 'matter' must also include thoughts . . . is a muddle, for if such an inclusion is made, the epistemological contrast between mind and matter, idealism and materialism . . . loses all meaning" (ibid., p. 245). Thought is ideal, and not material; it only exists as subjective reality, it cannot be separated from man and treated as something outside his consciousness. According to Lenin, an idea independent of man, sensation independent of man is "a lifeless abstraction, an idealist artifice" (ibid., p. 227).

The understanding of the ideal (spiritual) as *human* subjective reality, that is the reality of our thoughts, sense images, internal motives, etc., runs as a leading thread through all philosophical thought of Marx and Engels. In contrast with Hegel, Marx pointed out that the ideal is nothing else than the phenomenon of human consciousness, the reflection of the material in the human mind: "The ideal is nothing else than the material world reflected by the human mind and translated into forms of thought."[11] For the classics of Marxism the ideal does not exist outside the human mind. Analysing the process of labour, Marx draws his famous comparison between a conscious and an instinctive action: "But what distinguishes the worst architect from the best of bees is this, that the architect *raises his structure in imagination* before he erects it in reality. At the end of every labour-process, we get a result that already existed in the *imagination of the labourer* at its commencement" (italics mine— *D.D.*) (ibid., p. 174).

The identification of the ideal with subjective reality is particularly manifest in Marx's analysis of the role of consumption in production processes: "Consumption creates the need for *new* production, and therefore the ideal, intrinsically actuating reason for production, which is the presupposition of production."[12] According to Marx, "Consumption *posits* the object of production *ideally*, as an internal image, a need, an urge and a purpose" (ibid.).

Marx is also known to have repeatedly censured attempts to confuse the material and the ideal, i.e. what exists in man's mind as subjective reality with what exists outside man as objective reality. He pointed out the social roots of this theoretical muddle which helped to veil the trick of substituting an illusory change of the world—only in thought, in imagination, in fanciful dreams—for its real transformation. Exposing the idealist character of Bauer's notorious "absolute criticism", Marx wrote that to throw off the yoke of oppression "it is not enough to do so *in thought* and to leave hanging over one's *real sensuously perceptible* head the *real sensuously perceptible* yoke that cannot be subtilised away with ideas. Yet *Absolute Criticism* has learnt from Hegel's *Phänomenologie* at least the art of converting *real objective* chains that exist *outside me* into *merely ideal*, merely *subjective* chains, existing merely *in me* and thus of converting all *external* sensuously perceptible struggles into pure struggles of thought."[13] This passage reveals with utmost clarity the contrast between the ideal and the material, as well as the sophistry underlying attempts to confuse them.

It is worth noting in this context that the dialectical analysis of the problem of the ideal is incompatible with the violation of basic rules of logic. Formal logic, as has been convincingly shown by Kostyuk, "prohibits not a dialectical contradiction, but eclecticism, sophistry, confusion."[14]

In order to avoid vagueness in the analysis of the problem in interest, one ought to strictly adhere to the basic definition of the ideal as subjective reality and never lose sight of the logical contrariety of the categories of the ideal and the material.

3. Natural-Scientific Aspects of the Problem of the Ideal. Types of Subjective Reality

The question of the jurisdiction of natural science over the problem of the ideal deserves special consideration if only for the fact that a number of Soviet philosophers answer it in the negative. Moreover, a positive answer is sometimes declared incompatible with the Marxist understanding of the ideal and qualified as "naturalism". Carried to a logical conclusion, this view denies any relationship between natural science and the problem of consciousness in general.[15] Such is one of the results of a narrow sociological approach to the mind-matter antithesis.

By contrast with such extreme views some writers, for instance, L. A. Abramyan, contend that "the problem of consciousness clearly reveals a natural-scientific aspect, whereas the problem of the ideal is entirely free from it."[16] Regrettably, the author fails to provide any convincing arguments in support of this conclusion. "The ideal," he writes, "is a socially conditioned product of spiritual activity which has acquired the significance of a social phenomenon" (ibid.). So, the ideal lies beyond the limits of natural science for the simple reason that it is a purely social phenomenon. Now, human consciousness is also a purely social phenomenon, yet the author, somewhat at odds with elementary logic, does not exempt it from the laws of nature.

Abramyan underscores that the ideal is "an aspect of consciousness and cannot in any way be separated from it" (ibid.). This is an important statement amounting to an acknowledgement that the category of the ideal is a necessary predicate of "consciousness". But it can mean only one thing: in all scientific contexts the notion of consciousness should be inseparably linked, explicitly or implicitly, with that of the ideal. A researcher cannot reasonably probe into the problems of human consciousness unless he regards it as subjective reality.

Though Abramyan justly observes that the notions of consciousness and the ideal are not identical, we cannot accept his general conclusion. Indeed, if one concedes the problem of consciousness a natural-scientific aspect, one is bound to do the same in relation to the problem of the ideal, since the notion of the ideal represents the basic characteristic of consciousness which cannot be side-stepped whatever the scientific interpretation of the nature of consciousness. This side of the problem is worth discussing in more detail.

Let us first clarify the notion of "natural-scientific aspect" as used in the context of the problem of consciousness. Granting this problem a natural-scientific aspect, we evidently mean that the Marxist interpretation of the notion of consciousness is based not only on social, but also on natural sciences. As is well known, Lenin attached top priority to the natural-scientific substantiation of the dialectical-materialist understanding of consciousness as a property of highly organised matter. He frequently adduced the natural scientific (not philosophical) proposition "consciousness is a function of the brain" as an important argument against idealistic conceptions of consciousness. The assertion that "mind *is not* a function of the body" is, according to Lenin, idealism.[17] Expounding his view, Lenin wrote: "...the ordinary human idea became divine with Hegel when it was divorced from man and man's brain" (ibid., p. 227). "Sensation depends on the brain, nerves, retina, etc., i.e., on matter organised in a definite way" (ibid., p. 55).

Lenin's propositions underlining the necessary connection of philosophy and natural science are directed not only against the idealist divorce between consciousness and definitely organised material substratum, but also against vulgarised abstract sociological conceptions of consciousness disregarding its "natural" aspect. To be sure, the philosophical and natural-scientific aspects of the problem of consciousness should be clearly demarcated and the "mind-matter" philosophical problem should not be confused with the "mind-brain" scientific problem. Yet it is equally important not to lose sight of their essential connection which represents nothing else than the scientific aspect of the philosophical problem of consciousness. Indeed, one hardly needs being reminded that progress in the investigation of consciousness as a function of the brain enriches the philosophical concept of consciousness and stimulates its further development.

The latest achievements in animal psychology, psychophysiology, neurophysiology, neuropsychology, psychopharmacology, neurolinguistics, neurocybernetics, psychiatry and a number of other fields in natural scientific research play an important part in the enrichment and deepening of the philosophical problem of consciousness. A review of these achievements and an analysis of their impact on the investigation of philosophical problems might make a subject-matter of many monographs. For our purpose it will be sufficient to cite only a few examples.

First of all we should like to point out great progress achieved by animal psychology and animal semeiology in the study of animal psyche.[18] The results of these investigations raise many new questions regarding the prerequisites for human consciousness and its qualitative specificity. At the same time they reveal extreme complexity of animal psyche, particularly the subjective reality of higher animals. There is no doubt that animals have their own, still largely closed to us, subjective reality, their own "internal world", in some respects similar to ours. Yet not infrequently we are content with oversimplified notions of their psyche.

The boundaries of analogies between the subjective reality of animals and man are known to us but very vaguely. The latest achievements of animal psychology and animal semeiology give grounds to believe that these analogies are more numerous than it was thought earlier, that the categories of the higher and the lower are by far inadequate to characterise the relationship between human consciousness and the psychic reflection of animals, and that the genetic connection between them is not at all simple, as animals are endowed with certain mechanisms of psychic reflection and psychic self-regulation unknown to man.

Some Soviet philosophers, recognising the existence of animal subjective reality, deem it possible to include this specific field of psychic phenomena under the head of the ideal. Such is, for instance, the opinion of Alexander Spirkin.[19] Pointing out a number of features common to the psyche of man and animals, Tyukhtin treats the subjective reality of animals as the "intermediate level of the ideal",[20] i.e. as the lower level of reflection in ideal form. He convincingly shows the need to take into account the natural-scientific aspect of the problem of the ideal, the results of specific investigations into the reflective activity of the brain of man and higher animals reveal the nature of psychic reflection as a function of material substratum organised in a definite way.

What is called the ideal is for Tyukhtin nothing more than a specific functional property of highly organised matter. From this ensues the chief objective of scientific investigation: to get an insight into the mechanisms actualising this property and to understand the workings of the brain translating external objects into man's subjective reality. We whole-heartedly subscribe to this approach which leaves no room for an artificial divide between the philosophical understanding of the subjective image of the objective world on the one hand, and concrete scientific investigation into the nature of psychic reflection, on the other.

Of course, this is only one of the aspects of the problem of the ideal. Theoretical generalisations in this field are logically compatible with the results of research into the problem of the ideal from the epistemological and other angles. Moreover, the results of fundamental scientific investigation can modify philosophical concepts of one or another form of reflection. Suffice it to recall achievements in the physiological research of sensory processes which revealed the code nature of sensations and a number of important mechanisms in the process of conversion of the energy of external irritation into the phenomenon of consciousness.[21] The results of these investigations which, regrettably, have not yet become the object of a serious philosophical analysis pose new fundamental questions before the epistemology of sense reflection, giving, for one, good reason to speak of the image-sign dialectic in each act of sense reflection.[22]

As regards the use of the category of the ideal, it should be limited, in our view, to the sphere of man's subjective reality which is qualitatively different from the subjective reality of animals; the latter appears to be free from bipolarity and has no mechanisms of permanent self-reflection (introspection, reflec- ion, self-projection). Primates do not know schizophrenia. In heir case we have a different type of the wholeness of subjective eality and its internal organisation. The absence of abstract hinking, the high stability of needs, the genetic predetermina- ion of the main "norms" of mutual relations with the like nd with individuals of other species clearly testify to a different character of cognitive processes and psychic activity of animals.

However, these facts do not lend probability to the widespread opinion about the primitiveness of the psyche of higher animals. The extreme meagreness of our knowledge about their "inner world" accounting for the tenacity of oversimplified models of animals psyche will evidently prevail till man develops effective means of communication with animals based on respect for every living being and recognition of its ethical value. Comparing human and animal psyches, the investigators have identified their common features and, proceeding in a similar way, seek to establish what psychic properties animals do not possess. Yet we evidently do not know quite a number of important psychic powers possessed by animals and not available to man. This is vouched for by numerous facts of animal behaviour which we cannot explain in terms of known mechanisms (reflexes, instincts, etc.) and even by analogy with human abilities (for instance, a cat flown away from its home to a distance of 170 km immediately sets on the right course back home).[23]

In our opinion, the attempt to treat psyche under the category of the ideal is not devoid of sense, as it highlights the genetic connection of human consciousness with animal psyche, the properties they have in common, and, which is more important, the existence of specific animal subjective reality. However, such a broad interpretation of the category of the ideal involves certain difficulties and is not concordant with the traditional meaning of this category. Therefore, recognising the existence of specific animal subjective reality we should restrict the extension of the category of the ideal to human subjective reality, i.e. to *social quality*. As regards the subjective reality of animals, it should be treated under a different heading.

This approach brings out a qualitative difference between consciousness and animal psyche conceding at the same time their affinity and making it possible to treat subjective reality as a *generic notion*. Put another way, it proceeds from the existence of two qualitatively different types of subjective reality and, consequently, postulates subjective reality as a general notion, i.e. as something essentially common to men and animals: the faculty of psychic reflection and control, the presence of sense images, emotional and other subjective states.

I am fully aware of the shortcomings inherent in the proposed definition of subjective reality as a generic notion. However, I hope that the reader will understand me. What I mean is a specific "internal" functional property of a complex self-organising system. Subjective reality may have different structural organisations and different substantive components or modality sets of psychic states, yet such differences do not in any way affect the nature of what is called subjective reality (for instance, man has a capacity for abstract thinking whereas animals are incapable of it, but both men and animals are known to experience certain analogous subjective states indicative of inner activity which only ceases in deep sleep or in a coma).

There is a sad shortage of psychological and philosophical terms to characterise the very essence of subjective reality which constitutes a specific informational process in a complex self-organising system. Incidentally, the notion of subjective reality is not identical with the notion of the psychic, as the latter includes both the acts of behaviour in general and a number of informational processes that take place beyond the threshold of states subjectively real for a given system.

It is only natural that we seek to comprehend the nature of subjective reality in general by analogy with the general characteristics of human subjective reality or one of its components singled out with the help of common, psychological or philosophical language. For instance, a sense image is a phenomenon of subjective reality. Making this statement, we can discard mentally all its specific features (concrete content, axiological characteristics, authenticity, etc.), retaining only one of them—being an individual, actually existing (as the "current present"), subjectively experienced process.

Since subjective reality is a specific functional property of a self-organising system, its type depends on the specific qualities of this system (level of development, methods of functioning). So far, we know only two types of subjective reality, yet in principle there may be more. For one thing, we cannot discard the theoretical possibility of the existence of extraterrestrial intelligence. Having acknowledged such a possibility, we have good reason to expect the representatives of extraterrestrial civilisation Z to have a qualitatively different subjective reality from ours, the gap being probably as wide as the gap between human subjective reality and that of animals. However, a qualitative distinction will not exclude invariance in a number of important characteristics (just as the two terrestrial types of subjective reality are invariant in some respects). Such invariance provides in principle a basis for their *mutual understanding*.

We may equally expect an important or even qualitative change of human subjective reality as a result of long evolution, or even the creation of artificial subjective reality through cybernetic engineering. The latter supposition logically ensues from the premises of the functional approach to the exposition of life and intellect. Modern cybernetic devices can excellently execute formal-logical operations and perform some other psychic functions, yet we have no grounds for assertions that they have a subjective reality of their own. However, in defiance of common sense and conventional conceptual and axiological principles one may put forward a good case for a theoretical possibility of subjective reality emerging through cybernetic engineering. I have discussed these questions at length elsewhere.[24]

The multiplicity of the types of subjective reality is an important philosophical proposition as it broadens the traditional anthropocentric world-view and underlies scientific research into the problem of distinctions between types of subjective reality. This research which is mainly dependent on natural-scientific methods and has extended of late to the study of general scientific approaches and conceptions concentrates on the psyche of animals,[25] the problems of artificial intelligence[26] and on the search for extraterrestrial civilisations.[27] One can well imagine the enormity of the impact of a scientifically attested contact with extraterrestrial intelligence on present-day philosophical doctrines!

The denial of the natural-scientific aspect of the problem of the ideal derives from an exceedingly rigid, non-dialectical contrast between natural and social sciences which is patently at variance with their growing integration in the study of a number of highly topical problems of the modern world and in the already achieved results.

Such a denial unduly restricting the scope of philosophical research and fixing a gulf between philosophy on the one hand, and science and real social practice, on the other hand, stems from an extremely narrow, dogmatic understanding of the subject-matter of philosophy and tends to confine the analysis of subjective reality, its types and axiological-conceptual structure exclusively within the domain of psychology.

This approach appears to be totally untenable. Indeed, the study of such an important feature of subjective reality as the unique individual form of its existence is primarily a philosophical problem, yet any success in its investigation is hardly possible without due account of the results and prospects of natural-scientific and bio-social research. Special philosophical significance attaches to the investigation into the genetics of psychic distinctions which clearly shows that the unique integrity of every man's subjective reality, its inimitability is determined not only by social, but also by genetic factors.[28]

Another and potentially very important dimension of subjective reality with its structural-dynamic specificity is added by research into the functional asymmetry of the brain and the separate activity of the cerebral hemispheres.[29] The obtained results provide vast material for the philosophical analysis of such problems as the identity of personality, the nature of relationships between the self and not-self modalities in the structure of subjective reality, the unity of the sensual and the rational, the interconnection of language and thought, etc.* Directly related to the study of these problems are the results obtained by a new integrated scientific discipline—stereotaxic semeiology based on the experience in diagnosing and treating patients by implanting microelectrodes in the brain.[31] This discipline undoubtedly opens a new chapter in the study of the brain equivalents of man's psychic functions and the highly complex manifestations of his states of awareness.

The natural-scientific aspect of the problem of the ideal is most closely linked with the traditional psychophysiological problem which is conventionally treated by philosophers in the conceptual framework of the psychophysical problem. This problem dealing with the relation between the spiritual and the corporeal affects the most important aspect of the relation between the ideal and the material. Significantly, Descartes' formulation of the psychophysical problem has not lost its topicality till nowadays, as it permits demarcating the materialist, dualist and idealist solutions to the problem in question. It remains in the focus of attention of those natural scientists who seek to understand the relationship between the phenomena of consciousness and the activity of the brain. The questions they are concerned with have already been discussed by me in detail.[32] It was shown, in particular, that the investigation of the psychophysiological problem which pivots on the mind-brain antithesis is accompanied by a sharp ideological polemic between the exponents of materialism and dualism. The scope of research into the problem, the progress made and the philosophical conclusions drawn have been outlined in a number of publications[33] reflecting both the most significant achievements in this field over the past ten-fifteen years and the most difficult issues connected with the interpretation of consciousness as an ideal phenomenon. It is very characteristic that in treating the problems of mind's creativity and free will the proponents of dualism usually adduce age-old arguments in support of the doctrine of psychophysiological parallelism.[34]

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* These investigations have drawn extensive comment in the philosophical literature of English-speaking countries.[30]

As might be expected, the champions of a one-sided sociologised approach to consciousness rejecting the natural-scientific aspect of the problem of the ideal also dismiss as non-existent the psychophysical (and psychophysiological) problem.* Such an attitude is, of course, completely groundless and hardly needs any critical comment.

Most of the attempts to investigate consciousness as a specific property of highly organised matter are notable for a very narrow analytic approach: the researcher concentrates on only one element, manifestation or general feature of consciousness (for instance, perception as a conscious act, the process of thinking, the state of wakefulness, various mental disorders, etc.). The researcher singles out some interpersonal invariant of a given feature or manifestation of the conscious process,[36] say, "man's visual perception" or "man's visual perception of certain geometric forms". The result is usually a *formalised* functional description of the object of investigation in which the specific content of a conscious act is disregarded and its personal characteristics are left out of account.

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* For instance, V. I. Tolstykh writes: "Subscribing to the theory advanced way back by Descartes and the Cartesians the contemporary 'natural philosophers' advocate the entirely false psychophysical problem."[35]

The inadequacy and abstract nature of such "function-oriented" investigations are only too obvious, yet they constitute an important step towards the understanding of consciousness as concrete wholeness (let alone their practical value in medicine, pedagogy, engineering psychology, etc.).

Recent years, however have been marked by rapid development of a new research strategy combining the basic natural-scientific approach with the specific methods of psychological, psychiatric, linguistic and cybernetic analysis. The researcher's attention has shifted to *personality* invariants of conscious acts described now not only from the viewpoint of their formal-functional pattern, but also their conceptual content. The new strategy can be exemplified by the impressive achievements in deciphering the brain codes of psychic activity.[37] They open up new vistas in the investigation of consciousness as a brain function, as a property of highly organised matter. Any characteristics of consciousness as subjective reality represent, in one way or another, the functional properties of the brain and are subject to study as such. The experience gained over the past few decades convincingly shows that the advance of scientific knowledge in this specific field calls for further integration of natural and social sciences. There is no doubt that the general theory of scientific cognition will play an important part in the intensification of this process.

To sum up, then. It is obviously inconsistent to concede the natural-scientific aspect to the problem of consciousness and deny it to the problem of the ideal. This denial is rooted in the traditional gap between the categorial structures of scientific and humanitarian knowledge. Indeed, there are no direct logical links between the description of the phenomena of consciousness characterised by a definite content, set of values, intention, purpose, will, etc. (expressed in humanistic terms and included under the head of the ideal) and the description of a highly organised material system with its spatial and substrate characteristics, physical properties and chemical processes (expressed in terms of natural science). For this reason the category of the ideal, in contrast, for instance, with the categories of matter, movement, space, time, cause, law, etc. cannot be directly translated into the language of natural science; this feature makes it essentially different from other basic categories of dialectical materialism.

Such translation will only become possible if we provide mediating links now being developed at the general scientific level. The functions of these links can be assigned, for instance, to the category of information and a number of associated concepts which will provide a logical link between the categories of natural and social sciences and permit interpreting the category of the ideal in different terms according to the aspect of the ideal that becomes an object of scientific inquiry. This, in turn, will heighten the methodological role of the category of the ideal in the study of consciousness at special and general scientific levels.

4. Disputes over the Problem of the Ideal in Marxist Literature

Opinions of Soviet philosophers who have concerned themselves with the problem of the ideal in recent years are widely divergent on a number of issues. This is not to be wondered at, since Marxist-Leninist philosophy is a living creative theory which is inseparably linked with life and constantly enriched and tested by practice. In the light of the latest achievements of the natural and social sciences the problem of the ideal acquires new important aspects: within its classical conceptual framework new theoretical questions arise requiring fresh creative research.

The Marxist philosophers are unanimous in the solution of basic problems related to the nature of the ideal and in the criticism of idealist and dualist conceptions of the ideal. Yet alongside the consensus on matters of principle there are differences in the understanding of a number of specific questions pertaining to the content of the category of the ideal, to the evaluation of its logical links with other categories of dialectical and historical materialism, its world-view and methodological functions in the system of scientific knowledge, etc. These differences are sometimes referable to the complexity of the many-sided problem of the ideal: different authors approach it on different planes which have but loose theoretical connection with one another. In such cases disagreements are usually overstated or even non-existent. Some questions, however, are indeed disputable and they will become the object of our analysis.*

Most writers who have touched upon various aspects of the problem of the ideal in recent years unequivocally declare in favour of the reflective character of the ideal and its intrinsic connection with the brain processes and underscore the logical opposition of the ideal and the material viewing the ideal predominantly in epistemological terms. Usually avoiding the term "subjective reality", they in fact limit the notion of the ideal to this particular sense, i.e. describe the ideal as a subjective image, the idea of an object, a cognitive reflection, etc. This is, for instance how P. V. Kopnin characterises the main specific feature of the ideal: "The ideal is a reflection of reality in forms of man's activity, his consciousness and will; it is not a kind of intelligible mental object, but a man's ability to reproduce an object mentally, in his thoughts, aims, will, needs, and to manipulate images."[38]

Emphasising the dependence of the ideal on the brain processes on the one hand, and material activity, on the other, A. M. Korshunov writes: "The ideal is a sense image instrumental in reflecting reality."[39] Making a stand against the so-called two-aspect interpretation of the ideal, he justly observes that the ideal retains its identity when viewed both from the standpoint of epistemology and ontology, since the ideal only exists within the framework of the psychic, and the relation of the psychic to the brain is inseparable from its relation to the outer world: "The essence of the psychic consists in ideal reflection which is the property of the brain. Both in relation to the object and to its material vehicle this property takes the form of ideal image of external objects" (ibid., p. 59).

The concept of the ideal as subjective reality has been consistently defended by Alexander Spirkin: "Thought, consciousness are real. Their reality, however, is not objective, but *subjective*."[40] The importance of such a definition of the ideal is also underscored by other authors.[41]

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* The works devoted to the problem of the ideal and published in the 1950s-1960s, as well as the views on this problem of a number of authors that are not mentioned in this survey are discussed in detail in my book *Psychic Phenomena and the Brain* (§§ 5 and 12).

Spirkin takes a firm stand against vulgar materialist tendencies in the approach to the problem of the ideal and criticises attempts to turn subjective reality into objective reality, to dissolve, as it were, the ideal in objective activity: "The ideal is not objective activity as such, it is only the *spiritual aspect* of this activity. The reduction of the ideal to objective activity does not take us beyond the limits of vulgar materialism in its behaviouristic variety."[42]

The author underscores the unity of the two main aspects of the problem of the ideal: the organic connection of the ideal with the brain processes and with the social activity of man. These aspects should not be counterposed to one another. Spirkin also points out that it is wrong to contrast the social-historical and individual-psychological approaches to the problem of the ideal (ibid., p. 73). Like Korshunov, he comes out against the current opinion that consciousness is only ideal from the epistemological standpoint and must be treated as material from the ontological angle since a different approach allegedly runs counter to the principle of the material unity of the world (ibid., pp. 66-67).

Of special interest is the approach of V. S. Tyukhtin who insists on the reflective, functional character of the ideal. He holds that the ideal is only linked with mental processes, human consciousness, and regards it as a specific property of highly organised material systems, as a function of the brain. According to Tyukhtin, the problem of the ideal should be studied not only from the epistemological angle; the ideal "can and must be explained in terms of natural science on the basis of the interrelation between basic material factors . . . as a special functional property of the unity of these factors."[43]

For Tyukhtin the starting point in the analysis of the ideal is the division of all properties of things into two types: substrate properties and properties-relations (ibid., pp. 206-207). "Despite the fact that properties-relations are inseparable from substrate properties, the former *can be singled out by their specific function*, role, actual use, application. At a definite level of their organisation material systems acquire the ability to respond to the relations of orderliness (organisation, structure) overriding the effect of substrate (material-energy) relations. Put another way, such systems are characterised by the functional separation of the relations of orderliness from the substantive properties of things and by the actual use of such relations in a definite function" (ibid., pp. 208-209). The concept of the ideal, in the author's opinion, is usually connected with the advanced stage of the separation and use of such relations (ibid., p. 210). Here a new factor comes into play, the "factor of signal-informative causality expressing the activity of self-organising systems" (ibid.).

Thus the author makes out a case for the functional essence of all those phenomena which come under the head of subjective reality, since the latter is conceived as the subject's image of a definite relationship, structure, content with the respective substrate eliminated. Such, or nearly such functional view of the ideal is shared by Korshunov,[44] Spirkin[45] and a number of other authors including myself.

Pointing out that consciousness can and must be studied not only from the epistemological, but also ontological angles, Tyukhtin, however, is inclined to view research into the substrate of consciousness only in natural-scientific terms.[46] This approach appears to us rather narrow, as the ontological aspect of the phenomena of consciousness cannot, in our opinion, be limited to the investigation of their relation to brain processes, let alone the technique of natural studies, since the ontological aspect includes also an inquiry into subjective reality as such (i.e. its structure, dynamic properties, axiological orientation, internal self-organisation, etc.). Besides, investigation of the relationship between phenomena of subjective reality and their material vehicles necessarily presupposes going beyond the bounds of brain neurodynamics to the sphere of social activity and intercourse and, consequently, includes not only natural, but also social research. One gets an impression that in some instances Tyukhtin is prone to view the ideal as only expressing the epistemological aspect of consciousness (ibid., p. 212), thereby revealing his tendency towards the so-called two-aspect theory of the ideal.

The authors whose views have been outlined above unequivocally subscribe to the conception of the ideal as subjective reality and seek to integrate both the natural-historical and socio-historical perspectives helping to overcome a "one-dimensional" view of the problem.

The proponents of a different approach which is also represented in relevant literature recognise the basic definition of the ideal as subjective reality and also underscore the functional nature of the ideal. At the same time they hold that the category of the ideal only characterises consciousness from the epistemological standpoint and has no meaning in ontological terms. They support the view that consciousness is ideal from the epistemological perspective and material from the ontological perspective.

The most detailed exposition of this conception has been given by Ya. A. Ponomarev[47] and V. N. Sagatovsky[48] whose views were supported by other philosophers.[49] This standpoint often referred to as "two-aspect approach" has already been subjected by us to extensive critical analysis[50] and we shall limit ourselves here to just a few remarks.

In our opinion, the so-called two-aspect interpretation of consciousness is based on a similar two-aspect interpretation of the concept of matter and this implies highly doubtful corollaries. Such an approach is in fact traceable to the hypostatisation of the notions of the ontological and the epistemological which seem to acquire independence from the categories of the material and the ideal. Actually, however, the notions of ontology and epistemology are essentially determined by the categories of the material and the ideal, and not vice versa. The notion of the ontological implies existence. Yet existence as such has no definite sense without indication of the kind of reality that exists—objective or subjective.

However, when we say that objective reality exists (or that subjective reality exists), we add nothing to the above-indicated categories, since the attribute of existence is inherent in them. Therefore the definition of the category of consciousness through the notion of the ontological does not change its meaning to the opposite and does not warrant consciousness being identified with matter (and the ideal with the material).

It would not be correct to treat the ideal as a purely epistemological category. The ideal is always a reflection of some object, yet the content of this category is not limited to such reflection, since the ideal is also the reality of a conscious act and, moreover, the reality of a person's inner world. This is precisely what is meant by the unity of the epistemological and ontological aspects of the category of the ideal.

In our view, the thesis that consciousness is only ideal in the epistemological sense and material in the ontological sense derives, besides the excessive isolation of each of them, also from the rigid restriction of the cognitive relationship to the reflection of an *external* object. As a result, the reflectiveness of every conscious act is either disregarded completely, or relegated to a secondary plan. Not infrequently the cognitive relationship is viewed exclusively from the standpoint of veracity, i.e. in terms of the truth-falsity antithesis only. Such an approach leaving out of account the axiological component of cognitive relationship is bound to oversimplify the problem of the ideal.

The proposition of the unity of the ontological and epistemological aspects of philosophical knowledge rules out their excessive separation as incompatible with the monistic basis of the content of such fundamental philosophical categories as matter and consciousness, the material and the ideal.*

As a matter of fact, every category of dialectical materialism, first and foremost the categories of matter and consciousness, represents the unity of the ontological and epistemological aspects. This unity consists in that the content of these categories represents both the *object of reflection* and the *reflection of the object*. Therefore a purely ontological treatment of the content of the category of matter (or consciousness) is illusory being a product of naive ontologism (in which thought is unaware of itself and identifies the reflection of an object with the object of reflection; naive ontologism here passes into naive epistemologism which cannot conceive of any externalisation of the object of a cognitive act).

The need for consistent implementation of the principle of the material unity of the world induces the adherents of the so-called two-aspect approach to seek ways for overcoming difficulties involved in the conceptual correlation of the material and the ideal. The attractiveness of this approach consists in its orientation on experimental research into the nature of psychic phenomena and in its attempts to substantiate the conception of consciousness as a property of highly organised matter, as a function of the brain. Yet such views tend to place the categories of the ontological and the epistemological too wide apart which brings about a number of theoretical inconsistencies and contradictions. It is our opinion, therefore, that the "two-aspect approach" hardly holds out much promise.*

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* It is our conviction that the problem of the relationship of ontological, epistemological, axiological and praxiological aspects of philosophical knowledge is an extremely topical one and deserves much more attention than it has been accorded so far. Among the few publications concerned with this problem special mention should be made of the book by Alexeyev[illegible] who treats it at length in the context of the analysis of the basic question of philosophy.

In contrast with the opinions outlined above our philosophical and psychological publications often expound a different conception of the ideal which is characterised by special emphasis on the socio-cultural aspect of the problem and persistent disregard of the possibility and warrantability of research into the relationship between the ideal and the activity of the brain. In this conception the ideal is construed as synonymous with universal and necessary forms of spiritual activity materialised in objective social phenomena—social relations, scales of values, linguistic structures, logic of thinking.

This conception has a number of variations, particularly in the interpretation of the ideal in terms of activity and in explaining the mode of existence of what is called the ideal. However, despite various shades and some conceptual vagueness, we have here a definite theoretical platform uniting a number of authors, a general trend in the interpretation of the category of the ideal which is predominantly oriented on the problems of historical materialism, ethics, aesthetics, culturology. This conception of the ideal has found its most brilliant and consistent proponent in E. V. Ilyenkov, a distinguished Soviet philosopher who died in 1979. His theory has a large following and this is precisely the reason why its critical analysis is so topical.

Ilyenkov's article in *Soviet Encyclopedia of Philosophy* published in 1962 gave a powerful impetus to the study of the problem of the ideal. It raised important questions that gave food to creative thought. Controversial though it was, neither doubts about a number of its propositions, nor even resolute objections could detract from its value. This article marked an important stage in the investigation of the problem. I take this opportunity to acknowledge the great debt which I owe to Ilyenkov's works. The above indicated article, as well as Ilyenkov's subsequent publications played a major role in my reflection upon the subject in interest.

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* The conception of the ideal as a purely epistemological category, as well as the "two-aspect approach" has been subjected to repeated criticism in literature.[18]

Ilyenkov's views are known to have been expounded at length in his posthumous publication "The Problem of the Ideal",[53] and it is upon this work that we shall mainly focus our attention.

Ilyenkov made a start from the problems that had been brought into the philosophical foreground by Plato. The central among them was the question of the nature of universal ideas (mathematical axioms, logical categories, ethical imperatives, etc.) counterposed to fleeting sensuous images, individual states of the soul. "Whatever Plato's subsequent explanation of the origin of these impersonal universal prototypes of all widely varying states of individual soul, he undoubtedly has good factual reason to include them in a special category, since they represent universal standards of the culture which provides a framework for the spiritual development of an individual awakening to conscious activity and enforces upon him its demands as the law of his own life" (No. 6, p. 130).

Justly underscoring the social essence of such kinds of "ideas" as standards of culture, Ilyenkov confined the category of the ideal exclusively to those spiritual phenomena which are characterised by universality and necessity (see No. 6, pp. 131, 132, 137, 140 and others). In his view, the category of the ideal is incompatible with the sensuously-concrete, individual and accidental: "it is senseless to extend this definition (of the category of the ideal—*Tr.*) to purely individual mental states of a person at a given moment" (No. 6, p. 140).

Thus, my sensuous images, my "fleeting" thought of something (and, in fact, any conscious experience, as it is woven from "fleeting" images) fall outside the category of the ideal. If this is so, they must be called material. Besides, the "fleeting" may happen to be a stroke of poetical or theoretical genius and eventually turn into the "eternal". History knows lots of such "star moments of mankind" mentioned by Stefan Zweig.[54]

Barring sensuous images and other "fleeting" experiences from the category of the ideal, Ilyenkov never directly called them material. Such is the first theoretical discrepancy. It is traceable to Ilyenkov's rejection of subjective reality as the basic definition of the ideal and to his failure to clearly counterpose the categories of the material and the ideal from the very beginning of his discourse. To be sure, he made repeated references to such counterposition, yet he never stated that the contrast between the ideal and the material is the contrast between the ideal and the objective reality. The ideal was promptly defined by him as "the universal form and the law of existence and change of diverse empirically and sensuously given phenomena" (No. 6, p. 131). In this definition it cannot be clearly counterposed to the material as objective reality. As regards the elaboration that the ideal "only reveals itself and takes shape in historically established forms of spiritual culture, in socially meaningful forms of its expression" (ibid), it hardly adds anything to clarify the matter.

Now, in differentiating between the ideal and the universal one cannot overlook the crucial fact that under the category of the universal come not only products of thinking, but also objective reality itself, which makes it necessary to distinguish between the material and the ideal in this respect too. Such a line of demarcation is clearly drawn by A. P. Sheptulin who points out that "the categories of dialectics are ideal images reflecting and expressing in pure form universal properties and relationships, the universal forms of being existing in objective reality in organic unity with the individual and the particular".[55] However, the "established universal properties and ties are expressed not only in ideal images, but also through the means of labour created by people, as well as through the forms of their activity" (p. 411).

Ilyenkov never stated explicitly in his works that the definition of the ideal as subjective reality is incorrect, yet actually he resolutely rejected it since in many instances he directly identified the ideal with specific "objective reality" (No. 7, p. 157). In our opinion, here lies yet another important theoretical inconsistency in his conception of the ideal. Let us look at it more closely.

Ilyenkov conceived the ideal mainly as objectified results of human activity, thereby identifying the ideal with a specific class of material objects known to be social by nature. "In the historically established language of philosophy", he wrote, "'the ideal' is nothing else than a characteristic of materialised (objectified, embodied) images of socio-human culture, i.e. the established ways of socio-human activity which confront an individual with his consciousness and will as *specific 'supernatural' objective reality*, as a *specific object comparable to material reality*, existing in the same space and for this very reason often confusable with it" (italics mine—*D.D.*) (No. 6, pp. 139-140). Yet it is utterly impossible to compare "objective reality", however specific it may be, with "material reality" because they are the same thing. When the ideal is called specific ("supranatural", social) objective reality, it is presented as a kind of the material. What is actually meant here is, of course, not the ideal, but a specific class of material objects—*social objective reality* as distinct from purely natural reality (we shall discuss this question later in more detail).

It is in place here to cite an important passage from V. I. Shinkaruk who convincingly shows the mechanism of elevating the ideal to the rank of "specific objective reality". He writes that the system of human knowledge "is, in relation to an individual, an *external socially given reality* subject to assimilation (conversion into internal). To be sure, this reality as such exists in people's minds, since books and other means of storage and transference of knowledge can only acquire *meaning in the consciousness* of the one who writes and reads, speaks and listens. However, while assimilating spiritual (subjective) reality through material "objects" as *external reality*, an individual spontaneously accepts it as a kind of 'objective reality'."[50] If this objective reality is divorced from individual consciousness, we have an illusion of independent reality—according to Shinkaruk, precisely the kind cherished by Hegel. Actually, however, "the historical subject of knowledge is *society in man and man in society*. The subject is a dialectical unity of the general and the particular, the social and the individual" (ibid., p. 187). It is, first and foremost, a "*living* man and only *as long as* he is alive" (ibid.).

Attempts to correlate the notion of the ideal proposed by Ilyenkov with the category of the material reveal a number of other logical incongruities. Justly pointing out that every social object performs a definite function determined by the existing system of social relations, primarily those of production and consumption, and that the functional properties of a social object representing a "supranatural", social relationship cannot be substituted for its "natural" properties (physical, chemical, etc.), Ilyenkov nevertheless regarded such substitution as the key to the problem and, like many other Soviet authors, upheld the functional theory of the ideal. Yet in contrast with Tyukhtin, Korshunov and others who view the ideal as a functional property of man's reflective activity, including the activity of the brain, Ilyenkov treated it as essentially an extra-personal and suprapersonal relationship realised not in man's head, but in objective social reality itself.

"By the ideal," he wrote, "materialism ought to understand that very peculiar and clearly recorded relationship between at least two material objects (things, processes, events, states) within which one material object retaining its identity represents another object or, more accurately, its universal nature, universal form and law that remain invariant in all its alterations, its empirically obvious variations" (No. 6, p. 131). This definition of the ideal appears to me too broad and abstract. It covers any functional, *coded dependence,* even if it is in no way connected with human culture and is a strictly objective phenomenon. For instance, when a cat is intently watching a mouse, the nervous impulses arising in its retina carry certain information to the brain on the given external object, the mouse; this material process "retaining its identity represents another object". The same is true of any conditioned reflex: a flash of light or a ring represents, as it were food, etc., to a dog.

We are none the wiser with the author's reference to the "universal nature", "universal form", "universal law" of the object. Indeed, what "general law" is represented, say, by Tchaikovsky's *Swan Lake* adduced by the author as an example of the ideal?

Yet it is precisely the relationship of "representation" of one material object by another that was regarded by Ilyenkov as the basic distinguishing feature of the ideal. He repeatedly underscored it in his analysis of the value relationship. Speaking of those cases when the natural form of one commodity becomes the value form of another commodity, he concluded: *"It is pre-*

cisely for this, and no other, reason that the form of value is ideal, i.e. quite distinct from the palpable bodily form of the thing which represents, expresses, embodies, alienates it" (italics mine—*D.D.*) (No. 7, p. 148). "It is precisely this relationship of representation which received the title of ideal in the Hegelian philosophical tradition" (No. 7, p. 147).

At this point we must take a closer look at Ilyenkov's frequently repeated assertion that the value form is ideal.

Ilyenkov wrote: "In *Capital* Marx quite intentionally uses the term 'ideal' in the formal sense imparted to it by Hegel, and not in the sense characteristic of the entire pre-Hegelian tradition, including Kant... *The meaning of the term* 'ideal' is the same in Marx and Hegel" (ibid.). "In accordance with the meaning attached to the word 'ideal' by Karl Marx, the form of value in general (and not only its money-form) is a 'purely ideal' form... The price or money-form of a commodity, like any form of value generally, is ideal because it is absolutely distinct from the palpable bodily form, in which the commodity is represented, we read in Chapter 'Money, or the Circulation of Commodities' (here the author refers to Karl Marx's *Capital* —*D.D.*). In other words, *the form of value is ideal, though it exists outside and independent of man's mind, in space, outside man's head, in things, i.e. in commodities themselves* (here again the same reference—*D.D.*). This use of the word may very much puzzle a reader accustomed to the terminology of popular publications on materialism and on the relation of the material to the 'ideal'. *The 'ideal' existing outside and independent of our mind is quite an objective reality of special kind, independent of men's consciousness and will, invisible, sensually imperceptible and therefore appearing to them as something only 'thinkable', something 'supra-sensuous'*" (italics mine—*D.D.*) (No. 6, p. 136).

We have quoted this long passage in order to avoid any misunderstanding and reproduce the author's reasoning with the greatest possible accuracy. Frankly speaking, I rank myself with the adherents of the "terminology of popular publications" and also view the ideal existing "outside and independent of our mind" as either the material or the Hegelian absolute spirit. The relationship of representation is not a specific feature of what is called the ideal. It is characteristic of a very broad class of biological and social objects constituting objective reality. The value relationship is a relationship of representation, but it is purely material. Yet the notion of value relation is an ideal phenomenon, a reflection in man's head of a real objective relation. It also represents something different from itself, namely, a certain aspect of objective reality with which it should not be confused. The ideal is rather a peculiar kind of representation, representation in the form of thought, i.e. a subjective image of what it reflects.

For this reason one can hardly accept the view that Marx and Hegel understood the ideal in the same way and, particularly, that the form of value according to Marx is ideal. Regrettably, Ilyenkov did not cite the passages from Marx's *Capital* and *Economic Manuscripts* which he invoked in support of his opinion. The unbiased reading of these passages gives good reason to assert that Marx always understood the ideal as phenomena of subjective reality, and his view runs counter to the interpretation of the ideal as existing "in space, outside man's head, in things, i.e. in commodities themselves".

Here is Marx's statement in *Capital* referred to by Ilyenkov: "The price or money-form of commodities is, like their form of value generally, a form quite distinct from their palpable bodily form; it is, therefore, a purely *ideal or mental form*" (italics mine —*D.D.*)[57] This statement served for Ilyenkov as the foundation of his constructs. Yet he passed in silence over the crucial fact that the circulation of commodities is necessarily mediated through relations between people and necessarily presupposes a reflection of the value of commodities in the minds of those who participate in these relations. The manufacturer and the consumer of goods may not know the theory of value, but they always figure out, more or less accurately, their value. This mental reflection of value is an indispensable element of the process of commodity circulation.

Ilyenkov underscored the objective character of the relationship of representation of one commodity by another ignoring the human aspect of this relationship. By contrast, Marx viewed it as a unity of objective and subjective components. The "representation" in the cited passage from Marx is nothing else than "human representation". The concept of the ideal is linked here not with the representation of one commodity by another, but with "human representation" which is conceived as a menta reflection of the former. This becomes quite obvious from the subsequent passage not cited by Ilyenkov.

Karl Marx clearly stated not only the relations of commodities, but also the relation between the value of a commodity and its reflection in the owner's mind. The value of a commodity inherent in things themselves "is ideally *made perceptible* by their equality with gold, a *relation that, so to say, exists only in their own heads*. Their owner must, therefore, lend them his tongue, or hang a ticket on them... Since the *expression* of the value of commodities in gold is a merely ideal act, we may use for this purpose *imaginary or ideal money*. Every trader knows, that he is far from having turned his goods into *money*, when he has expressed their value in a *price or in imaginary money*, and that it does not require the least bit of real gold, to *estimate* in that metal millions of pounds' worth of goods. When, therefore, money serves as a measure of value, it is employed only as *imaginary or ideal money*. This circumstance has given rise to the wildest theories" (italics mine—*D.D.*) (ibid., pp. 98-99).

As we see, Marx unequivocally links the ideal with the "imaginary" and distinguishes it from the material or objective reality. The term "ideal" is used by him, contrary to Ilyenkov, not "in the formal sense imparted to it by Hegel" but exactly in the sense referred to as "popular" by Ilyenkov and used by Kant in his example with imaginary and real thalers (see No. 6, p. 137). The same is true of the *Economic Manuscripts of 1857-1858*. In the chapter on money Marx writes: "Price is an attribute of the commodity, a determination in which it is *introduced* as money. It is no longer an immediate but a reflected determinateness of the commodity. Alongside real money there now exists the commodity as something notionally cast in the role of money."[58] All these explicit statements of Marx are clearly at variance with the allegation that he considered the ideal as existing "outside man's head, in things, i.e. in commodities themselves".

Marx's impatience with the confusion of the ideal and the material, abstractions and objective reality, is well known and his devastating criticism of corresponding conceptions in the "Hegelian tradition" preserves today all its methodological value. Recall, for instance, his critical remarks on Lassalle's commentary on Heraclitus's pronouncement: thus gold turns into all things, and all things turn into gold. "Gold, says Lassalle, is here money (which is correct) and money is value. Therefore the Ideal, the Universal, the One (value), and things, the Real, the Particular, the Many. He utilises this startling piece of penetration in order to give us, in a long note, an earnest of his discoveries in the science of political economy. Every word is a blunder, but declaimed with remarkable pretentiousness. I can see from this one note that the fellow is proposing to present political economy in the Hegelian manner in his second great opus."[59] These words appear to be fully applicable to our opponent's notions.

Ilyenkov's theory has rather a large following in philosophical and psychological circles. Very similar are the views expounded, for instance, by A. N. Leontyev who speaks of the singling out of the "ideal aspect of objects" by which he means the objectified results of human activity.[60] Hence the trend to regard the result as primary and the activity as secondary, and the conviction, groundless, in our opinion, that "objectified activity is richer and truer than preceding consciousness" (ibid., p. 129).

V. V. Davydov interprets the objectification of an image "as its transformation into an objectively ideal property of the object".[61] A question naturally arises: What is the difference between "an ideal property of the object" and its material properties? Is it that the former is a product of man's activity and the latter exists by nature? In that case the airplane wing sweep is an ideal property as it is the designer's objectified idea, the composition of the wing metal is also an ideal property as the alloy is designed and calculated beforehand, etc. As a result, the airplane turns out to be devoid of any material properties except, perhaps, the properties of the atoms of its components.

One can hardly take seriously this sort of division of a social object's properties into material and ideal. As a matter of fact, every material property of an object is its real, objective quality, and if one speaks of a "ready-made" social object as such, irrespective of the process of its "deobjectification", reflection in the mind, there is no reason for characterising its properties with the help of the category of the ideal.

It is also worth mentioning the viewpoint of S. L. Rubinstein who analysed the category of the ideal in its relation to the notion of the psychic. His frequently cited statement runs thus: "The term 'ideal' predominantly characterises an idea, an image, in so far as they are objectified in a word and included in a system of socially developed knowledge which is given to an individual as a kind of 'objective reality' and thus acquire relative independence, breaking away, as it were, from his mental activity."[62]

This passage, indicative as it is of an affinity of the views of Rubinstein and Ilyenkov, does not yet reveal fully the former's stand. The word "predominantly" in the cited passage is evidently not accidental, as it somewhat "softens" the statement making it more flexible and allowing for a possibility of applying the category of the ideal to psychic activity as a process. In Rubinstein the result and the process are dialectically interrelated as is evidenced from his understanding of the relationship between the mental and the logical (and this is a very important aspect of the problem of the ideal!). According to Rubinstein, thinking as a mental process is inseparable from logical structures which are "relatively independent" of the individual and have a status of cultural standards and social consciousness (ibid., pp. 48-49, 51-52 and others).

This is also evidenced from Rubinstein's resolute objections to the Platonic absolutisation of thinking, i.e. the divorce of the product of thinking from an individual's cognitive activity (ibid. p. 47), as well as from his radical antipsychologism: Rubinstein underscores the "subjective nature of psychic phenomena", i.e. the indissoluble connection of all psychic phenomena and man as an individual (ibid., p. 61). According to Rubinstein, the ideal represents one of the aspects of the psychic: "In relation to objective reality psychic phenomena are, epistemologically, an image of it. It is precisely this relation of image to object, idea to thing that accounts for the attribute 'ideal' being attached to psychic phenomena; indeed, it is from the standpoint of epistemology that the psychic is rated as ideal. That *does not mean*, of course, *that psychic phenomena cease being ideal when they are viewed in a different connection, e.g. as a function of the brain*" (italics mine—*D.D.*) (ibid., p. 41, also see p. 36).

As we see, Rubinstein does not deny the [illegible] of the ideal with the activity of the brain and does not reduce the ideal to a purely epistemological relationship accentuating the "representativeness" of logical norms in individual consciousness, in the psychic activity of the real individuals. Though Rubinstein's views on the problem of the ideal sometimes lack clarity and consistency, his stand is essentially different from the conceptions of Ilyenkov, Leontyev and Davydov which have much in common.

Ilyenkov opposed any attempts to interpret the category of the ideal with the help of universally recognised scientific notions (such as, for instance, the notion of information) and to establish theoretical links between the ideal and the reflective activity of the brain. These attempts were declared "naturalistic", "pseudomaterialistic", etc. In his opinion, "such *subversion* (this time physiological) in the field of science can yield no fruit..." (italics mine—*D.D.*) (No. 6, p. 129). This was Ilyenkov's response to my proposal to treat the mind-brain problem in terms of the information theory. I have already given a detailed critical analysis of his views[63] and any further debate upon this matter is hardly necessary.

However, there is just one point that needs clarification. If the ideal is "a characteristic of things" (see No. 7, p. 157) and not of consciousness, it is senseless to establish any connection between "the ideal" and the functioning of the brain—such is the keynote of Ilyenkov's argument. Yet even here his reasoning lacks consistency. Reiterating and rehashing with characteristic ardour the same old proposition that the ideal is a "specific object *absolutely independent of the structure of the 'brain' and its specific 'states'*" (italics mine—*D.D.)* (No. 6, p. 136), he at the same time makes the following statement: "Quite a different thing is the brain polished and recreated by labour. It alone becomes the organ, nay, the plenipotentiary of 'ideality', the ideal plan of activity characteristic only of Man. This is where we have truly scientific materialism capable of coping with the problem of 'the ideal'" (No. 7, p. 157). One might think there exists some other *human brain* which is not "polished" and not "recreated by labour"! Again, after this utterance one is certainly in the dark about the difference between "pseudomaterialism" with its "subversion" in science and "truly scientific materialism". Such mishaps are none too rare with Ilyenkov.

For instance, from his viewpoint the status of the ideal is denied to the sensual-emotional. Since the artistic image falls under this head, it must be included in the category of material phenomena, yet Ilyenkov, contrary to his own logic, views it as ideal.

Ilyenkov conceived the ideal "as a *law* governing man's consciousness and will, as an *objective compulsory pattern of conscious volitional activity*" (italics mine—*D. D.*) (No. 7, p. 153). Now, is it possible for conscious volitional activity not to conform to the objective compulsory pattern? If it is, such activity has nothing in common with the ideal. If it is not, there is no room for creative activity, and free volition is nothing but a fiction. In any case, "the ideal" thus understood is not compatible with the concept of creative activity of the mind, and it is at this point that Ilyenkov's interpretation of the problem of the ideal arouses our most resolute objections. Indeed, it rules out any autonomy of a living creative individual assigning him the role of a puppet, a functional element within "the objective compulsory pattern".

It is worth noting that the concept of the ideal propounded by Ilyenkov for many years has been opposed by a number of Soviet philosophers who criticised the identification of the ideal with external object forms of human activity and particularly with "ready-made" social reality, the denial of the connection of the ideal with the activity of the brain, etc.[64]

There is no denying the fact that Ilyenkov's works contain not a few sound and interesting propositions. He has given a detailed analysis of the specificity of cultural values, brought into the limelight the suprapersonal status of social consciousness, put forward a number of fruitful ideas regarding the functional nature of social materiality and products of mental activity, the invariance of the "content" of many such products with respect to individual consciousness, etc. Besides, his emotional manner of polemicising and genuine interest in the nature of the ideal coupled with the ability to pinpoint an issue have indoubtedly added impetus to the inquiry into this difficult problem.

Nevertheless, Ilyenkov's basic propositions and conclusions appear to us contradictory and his general stand on the problem of the ideal untenable. His conception clearly reveals the drawback which is characteristic of the present state of investigation into the problem—the tendency to analyse [illegible] of its aspects in isolation from others, to overestimate the importance of one set of features and underestimate or even completely disregard another one. This is typically the case with such interrelated approaches as social-normative and personal-existential, epistemological and ontological, conceptual and structural, logico-categorial and axiological-semantic. Particularly characteristic is the divorce between the following major aspects of the problem of the ideal: general philosophical, socio-cultural (including the issues that come within the scope of historical materialism, ethics, aesthetics, scientific atheism, culturology, and many other fields of the humanities), personal-existential (covering the axiological-semantic and intentional-volitional structures of subjective reality), theoretical-cognitive (analysis of the ideal from the viewpoint of the verity of knowledge and methodology of science), and what may be very approximately called genetically natural. The latter aspect encompasses a broad spectrum of questions including the prehistory of consciousness and its relation to animal psyche, the connection between the categories of the ideal and the psychic, the ideal and information, the interpretation of the category of the ideal within the framework of the mind-brain and artificial intellect problems and, finally, the questions pertaining to the analysis of the structure of subjective reality, its functional specificity and status in the system of relationships of the material world.

There is no doubt that the above indicated major aspects of the problem of the ideal are interdependent and that inquiry into one of them is bound to overstep its limits. It is highly regrettable, therefore, that the investigations carried out so far have been mainly concerned with the general philosophical issues and barely touched upon other aspects of the problem.

The task that faces us consists in an integrated conceptual analysis of the category of the ideal from all major perspectives. This analysis should centre upon the basic concept of the ideal as subjective reality which should run as a leading thread through all discourse, including the discussion of the socio-cultural aspects of the problem and the analysis of the social dialectics of the material and the ideal.

NOTES TO CHAPTER 1

[1] Frederick Engels, "Ludwig Feuerbach and The End of Classical Ger-man Philosophy", in: Karl Marx, Frederick Engels, *Selected Work in three volumes*, Vol. 3, Progress Publishers, Moscow, 1976, pp. 345-346.

[2] Yu. A. Petrov, *Logical Functions of the Categories of Dialectic*, Moscow, 1972, pp. 21-22 (in Russian).

[3] M. N. Rutkevich, *Dialectical Materialism*, Moscow, 1973, p. 67 (in Russian).

[4] S. T. Melyukhin, *Matter in Its Unity, Infinity and Developmen*, Moscow, 1966, p. 50 (in Russian).

[5] I. S. Narsky, *Dialectical Contrariety and the Logic of Cognition*, Moscow, 1969, p. 64 (in Russian).

[6] V. I. Lenin, "Materialism and Empirio-Criticism", *Collected Works*, Vol. 14, Progress Publishers, Moscow, 1977, pp. 260-261.

[7] P. V. Kopnin, *Dialectic as the Logic and Theory of Knowledge*, Moscow, 1973, p. 53 (in Russian).

[8] V. I. Lenin, "Materialism and Empirio-Criticism", p. 147.

[9] Ibid., p. 245; see also: idem, "Conspectus of Hegel's Book *The Science of Logic*", *Collected Works*, Vol. 38, 1980, p. 114.

[10] V. I. Lenin, "Materialism and Empirio-Criticism", p. 244.

[11] Karl Marx, *Capital*, Vol. I, Progress Publishers, Moscow, 1978, p. 29.

[12] Karl Marx, "Economic Works. 1857-1861", in: K. Marx, F. Engels, *Collected Works*, Vol. 28, Progress Publishers, Moscow, 1986, p. 29.

[13] Karl Marx and Frederick Engels, "The Holy Family or Critique of Critical Criticism", *Collected Works*, Vol. 4, Progress Publishers, Moscow, 1975, pp. 82-83.

[14] V. N. Kostyuk, *Elements of Modal Logic*, Kiev, 1978, p. 175 (in Russian).

[15] See, for instance, E. V. Ilyenkov, "The Problem of the Ideal," *Voprosy filosofii*, 1979, Nos. 6 and 7; idem, "What Is Personality?" in: *Where Does Personality Begin?* Moscow, 1979, and *Spiritual Production*, Moscow, 1984, pp. 36-37 (all in Russian).

[16] L. A. Abramyan, "The Concept of Reality", *Voprosy filosofii*, 1980, No. 11, p. 103.

[17] V. I. Lenin, "Materialism and Empirio-Criticism", p. 90.

[18] *How Animals Communicate*. Ed. by T. A. Sebeok. Indiana University Press, 1977.

[19] A. G. Spirkin, *Consciousness and Self-Consciousness*, Moscow, 1972, p. 75 (in Russian).

[20] V. S. Tyukhtin, *Reflection, Systems, Cybernetics*, Moscow, 1972, p. 209 (in Russian).

[21] See G. Somjen, *Sensory Coding in the Mammalian Nervous System*, Century-Crofts-Meredith, New York, Appleton, 1972.

[22] N. I. Gubanov, "Image and Sign in Sense Reflection", *Filosofskie nauki*, 1980, No. 5; idem, "Sign Specificity", [illegible] 1981, No. 4, pp. 59, 60.

[23] G. Nikolaev, "Beings with a Sixth Sense", *Nauka i zhizn*, 1975, No. 3.

[24] D. I. Dubrovsky, *Psychic Phenomena and the Brain*, § 18; idem, *Information, Consciousness, Brain*, pp. 106-107, 119-121; idem, "Cybernetica a niektore aspekty problemu czlowieka", *Czlowiek i swiatopoglad*, 1976, No. 4.

[25] See, for instance, K. Z. Lorenz, *King Solomon's Ring*, Methuen, London, 1971; K. E. Fabri, *Animal Psychology*, Moscow, 1975 (in Russian).

[26] See Nils J. Nilson, *Problem-Solving Methods in Artificial Intellect*, McGraw-Hill, New York, 1976; Yu. V. Orfeev, V. S. Tyukhtin, *Human Thinking and "Artificial Intellect"*, Moscow, 1978 (in Russian).

[27] *Astronomy, Methodology. World Outlook*, Section "The Problem of Search for Extraterrestrial Civilisations", Moscow, 1979 (in Russian).

[28] D. I. Dubrovsky, "Concerning Analysis of Methodological Aspects of a Bio-Social Problem", in: *Biology and Contemporary Scientific Knowledge*, Moscow, 1980 (in Russian).

[29] T. A. Dobrokhotova, N. N. Bragina, *Functional Asymmetry and Psychopathology of Focal Injuries of the Brain*, Moscow, 1977 (in Russian); R. W. Sperry, "Forebrain Commissurotomy and Conscious Awareness", *The Journal of Medicine and Philosophy*, 1977, No. 2.

[30] See the list of references in: D. I. Dubrovsky, "Some Thoughts Concerning Mario Bunge's article 'Insolvency of Psychophysical Dualism' ", *Filosofskie nauki*, 1979, No. 2.

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Chapter 2.

The Structure of Subjective Reality

1. Subjective Reality as an Integral Multidimensional Dynamic Bipolar and Self-Organising Structure. The Unity of the "Self" and "Other" Modalities

Investigation into the structure of subjective reality is a very topical and simultaneously exceedingly complex problem which, regrettably, has not yet been subjected to a systematic analysis in our philosophical literature.[1] It is partly accounted for by the widespread belief that this problem is psychological rather than philosophical. True, the psychologists are directly concerned with it—they carry out various empirical investigations and try to provide corresponding theoretical explanations. Yet the development of a general theoretical approach to individual consciousness and, first and foremost, to the axiological-semantic structure of subjective reality has always been regarded as a prerogative of philosophy which indeed showed a considerable interest in this subject. However, it happened so that the research was mainly carried out by representatives of idealistic trends, particularly the phenomenological and existentialist schools which were very active in the past few decades. Their views must be subjected to a serious critical analysis.[2]

We shall now try to outline a number of general and, in our opinion, essential features of the structure of subjective reality without pretending in any way to completeness or conceptual perfection of our survey.

As has been pointed out above, the term "subjective reality" can mean not only the integral whole, but also any of its individual components. In the latter case we usually speak of a *phenomenon* of subjective reality. The wholeness of subjective reality reveals itself primarily in its *personal character* by which is understood the integration of the internal diversity of subjective reality by a given unique Ego. Any individual phenomenon of subjective reality, be it thought, perception or even sensation is always mediated to a certain extent by a concrete Ego and bears, as it were, its hallmark.

Subjective reality is a historically concrete wholeness in a definite point of its socio-biographical trajectory. It is a constantly changing continuum in the sense that its "content" and vectors of activity, i.e. current images, thoughts, motives, volitional intentions, etc. are always in a state of flux. The central integrating and activating force of this perpetual motion is our Ego.* All multitudinous phenomena of subjective reality occurring both simultaneously and consecutively are encompassed, organised and controlled, in one way or another, by our Ego which, in turn, is always permeated through, so to speak, with their content. It is only in a pathological state, in extreme conditions or under an external influence on brain structures that the so-called psychic automatisms may develop—an emotional experience of the estrangement of our Ego from certain components of subjective reality, their independence of the Ego and obtrusion upon it as something alien.**

In the continuum of subjective reality the Ego is just *one* of the multitude of other phenomena, yet it is the beginning and the end of this reality in the sense that it participates in and partakes of each of the phenomena thereby representing their interrelation and, consequently, the uniqueness of a given subjective reality as a whole.

Every interval of subjective reality includes a definite "content field" and the Self. The "content field" representing the phenomena of reality (within the given interval) is apparently external to the Self and opposed to it, yet at the same time the Self, tive reality by a given unique Ego. Any individual phenomenon of subjective reality, be it thought, perception or even sensation is always mediated to a certain extent by a concrete Ego and bears, as it were, its hallmark.

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* The most detailed and systematic exploration of the Ego problem in Soviet literature can be found in Kon's book *The Discovery of the Ego* where the author has analysed and tied together its philosophical, sociological, psychological and psychiatric aspects.[3]

** Summing up the results of psychological investigations under the conditions of stereotaxic effect on the brain (with the help of microelectrodes), Smirnov divides such phenomena into three groups: (1) sensory psychic automatisms ("alien", "odd" sensations); (2) emotional psychic automatisms ("alien", unmotivated experiences of joy and fear); (3) experiences of "uncontrollability, spontaneity of current psychic processes, their independence of the Self".[4]

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Every interval of subjective reality includes a definite "content field" and the Self. The "content field" representing the phenomena of reality (within the given interval) is apparently external to the Self and opposed to it, yet at the same time the Self, as it were, "shares" in this "content field" which represents its sphere of activity. Depending on the concrete "content" of this field the creative possibilities of the Self may be great or very limited, but they are always realised in it to one or another extent attesting to the intentional and active nature of a conscious act.

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Let us take a simple example. Suppose, the "content field" of a given interval is dominated by the perception of a starry sky or an acute toothache. In both cases the "content" is given by real objective factors and in this sense is independent of the Self. Yet a subjective image of the starry sky or a toothache always belongs to a concrete individual. It is *I* who see the starry sky or suffer from a toothache, wherefore my Ego of necessity participates in the given "content", imparts to it my qualities in this or that way, and manipulates it. Indeed, the vision of the starry sky an individual is having at the moment is largely determined by his general knowledge, interests, emotional state, etc. The same is true of the specificity of the experience of a toothache, though the manipulative capacity of the Self is normally limited here to a maximum degree. Nevertheless, people react to pain differently and try to overcome it in different ways. Some can force it to the periphery of the "content field" replacing its nucleus by a different "content". There are also individuals who are capable of suppressing pain and in such cases the manipulative possibilities of the Self are very high.

Hence, the "content field" is indicative of the personal traits of a given Self, its activity. Attempts to investigate the introsubjective aspect of the relationship between the Self and the present "content field" reveal their dialectically contradictory nature, the unity of their externalisation and interdependence. The antinomic character of this dynamic structure manifests itself with special clarity in this paradox: the specificity of the Ego, or at least some of its aspects or characteristic features, may represent (and usually does) the "content field" (when the Ego reflects, appraises and regulates itself) and, for this very reason, the "content field" may constitute the "Ego".

Here we have a subtle dialectic of introsubjective relations which is not easy to describe in clear analytical terms due to the sad lack of penetration into the problem and the resulting inadequacy of scientific terminology (this latter circumstance accounts for frequent resorts to metaphoric expressions in attempts to analyse individual aspects of the structure and dynamics of subjective reality).

We have already pointed out that subjective reality as an integrated whole can only exist in a unique individual form. This is not to say, of course, that it is invariant in many respects. It would be a mistake to think that the individual and unique lies beyond the grasp of science. Science is capable of describing, explaining and predicting individual and unique phenomena by the multitude of their invariants, as there is nothing absolutely individual and absolutely unique in the world. Science in its advance focuses on ever more specific invariants representing characteristic features of the individual. Manipulating them on the empirical and theoretical levels, a researcher can get a better insight into the specificity and genesis of a given individual phenomenon as a representative of a certain (no less unique) class of objects. The view of the individual as lying beyond the scope of scientific cognition is essentially non-dialectic and tends to mystify individuality.

In principle, the exploration of subjective reality presupposes the solution of the same methodological problem that confronts a researcher studying, say, the growth of a birch or the behaviour of octopuses. The researcher must single out certain invariants (since birches and octopuses can only exist as inimitable unique organisms; but, for the matter of that, it is true at least of all representatives of animate nature and, perhaps, of all discrete phenomena in general). Using the invariants already available and creating new ones, scientific thought moves from the abstract to the concrete. All depends on the validity of such invariants and on the results achieved by using them. We shall now try to define some very general characteristics and structural invariants of subjective reality with a very modest aim in view: to demonstrate the possibility of initial, sketchy and tentative division and structuralisation of this complex object.

Generally speaking, the structure of subjective reality has the following features. First, it is *dynamic*, i.e. its components and their relations are in a state of constant change; the orderliness inherent in it and the resulting stability are only realised through continuous local and global alterations. Second, it is *multidi-*

mensional, i.e. not linear in its orderliness, representing a unity of many dynamic "dimensions" or qualities not reducible to one another and having their own organisational principle. For instance, the axiological dimension of the structure of subjective reality, inseparable as it is from the active-volitional "dimension", cannot be reduced to it, and vice versa, since each of them is a specific register of a single organisation of subjective reality. Third, it is *bipolar*, i.e. its main links, introsubjective relations determining the wholeness of subjective reality are a unity of opposites. Fourth, it can be regarded as a *self-organising* structure, since its wholeness is maintained by internal factors keeping local changes under control and not allowing them to destroy the wholeness.

The above indicated general features are dialectically interrelated and may serve as each other's determinants, which means that the dynamism of the system is multidimensional, bipolar and represents the process of self-organisation, that the bipolarity is dynamic, multidimensional and provides for the self-organisation of the system, that the multidimensional nature of the system presupposes its dynamism and bipolarity, etc. Thus not only does each feature specify every other one, but the structure of subjective reality as a whole becomes more concrete and meaningful.

The next step of the analysis is aimed at revealing and describing the initial, *basic structure* of subjective reality. It is, in our opinion, *a unity of opposite modalities—Self* and *Other*. This unity and interdependence represent the basic introsubjective relationship which manifests itself in every interval of subjective reality and shapes the framework of its dynamic semantic content. We have already shown it above while discussing the correlation between the Self and the content field in every concrete interval of a conscious experience.

Opposing one another, the Self and Other (not-Self) modalities are at the same time necessarily interconnected and make a single dynamic bipolar system of the "content" of subjective reality. The movement of this "content" represents simultaneously the process of reflection of the object, the axiological attitude to it and the control of the movement itself.

In every interval the Self and Other modalities retain their determinateness and their specific "content". A given interval may be dominated by the "content" belonging either to the Self (when the mind of an individual focuses on his personal traits, i.e. when he thinks about them), or to Other (when his attention is drawn to some external object or when he is engrossed in some activity).

A content can change its modality in another dimension, since the content belonging to the Self, i.e. reflecting the personal traits of a cognising individual, an agent or a patient (the subject's image of the Self), becomes for him the *object* of cognition and assessment and, consequently, poses as Other, not-Self; to be sure, in this case the modality of the Self does not disappear and it would not be correct to say that the given interval only contains the not-Self modality; bipolarity still obtains, yet the Self changes its content. Conversely, the content belonging to Other (i.e. reflecting the personal traits of other individuals, external objects, processes) may turn into the Self modality, pass from Other to the Self, be assimilated by the given Self in the acts of empathy, ascription of human characteristics to natural phenomena, in games, in the internalisation of another individual's experience, in taking on a new social role, etc.

This fluidity is a manifestation of the multidimensional dynamism of the modalities of the Self and Other each of which is capable of passing into its opposite in a different dimension or interval by changing the modality sign of the "content" being experienced. Such mutual transformations create extremely broad possibilities for the conscious reflection and projection of both objective and subjective reality, for the assimilation of social experience and for creative activity.

It is highly significant that continual mutual transitions of the Self and Other modalities do not disturb the bipolar structure of subjective reality and the unity of these opposites in any of its actual intervals. Each modality can only be determined through the contrast with its counterpart and within the framework of their correlation. If a given content passes into the other modality (e.g. from the Self to Other), it is replaced by another content retaining the former modality, since its opposite cannot exist without it. For this reason the Self is always what contrasts and correlates with Other and, conversely, Other is what contrasts and correlates with the Self.

This interdependence (and, consequently, unavoidableness of the Self) has always been adduced as an argument in support of subjective idealistic conclusions and agnostic speculations. They were usually based on the identification of Other as a *phenomenon of subjective reality* with *reality in general* and, consequently, the very first epistemological postulate eliminated objective reality. This postulate, which confines philosophical thought to sterile abstractions mirroring nothing but the structure of subjective reality, deprives it of any capacity for self-reflection. Indeed, these very abstractions in that case cannot be reflexive and are absolutely immune from any critical analysis: their content is posited as the primary, sole and unquestionable reality.

That lands us in naive ontologism turned inside out—subjective reality is taken as the object of our knowledge, but the problem of its authenticity is completely ignored, the need for epistemological reflection is obviated and special analysis of those cognitive means which are used to single out and describe a given object becomes unnecessary. Yet without such an analysis we cannot have reliable knowledge either of objective or of subjective reality.

Consistent subjective idealism inevitably arrives at solipsism. This philosophical conception leading to absurdities can only be logically constructed on the basis of radical ontologism in which the Self (like its derivative Other) is posited as Being, known but not cognisable. Such a logical incongruity inherent in radical (or childishly naive) ontologism reveals itself in the premises of any subjective idealist conception.

The Self and Other modalities cannot overstep the bounds of subjective reality, yet they mirror both the outer world with man as objective reality and the man's inner world as subjective reality. The aforementioned ability of a given content for passing from one modality into the other represents nothing else than a socially developed dialectical mechanism of ever more profound and active reflection of the outer world—a process which includes a tentative, preliminary, "blueprint" *transformation* of objective reality *on the ideal plane* in the human mind, i.e. in the sphere of subjective reality.

Debates centring around the notions of the Self and Other not infrequently arise due to erroneous identification of the former with subjective reality, and the latter, with the appearance of objective reality. In fact, the Self modality may reflect not only phenomena of subjective reality, but also real social ties, actions and relations of an individual. In turn, the Other modality may reflect and "represent" phenomena of both objective and subjective realities (provided they are the *object* or cognition, evaluation and control in a given interval).

The structure of subjective reality reveals its specificity with more clarity when the main aspects of the Self-Other antithesis come into light and the relations between them acquire a definite content. At this stage we may try to discern these aspects taking the Self modality as the frame of reference.

The Self-Other antithesis emerges as the relation of the Self to: (1) external objects, factors, processes; (2) its own body; (3) itself; (4) another Self; (5) "Us", i.e. the social group, community with which the individual identifies himself; (6) "Them", i.e. the social group, community from which the individual excludes himself and regards it as the opposite; (7) the "Absolute" which is understood and experienced differently by different individuals and depends on the peculiarities of their world outlook, frame of mind and disposition. It may take the shape of the world as a whole, the Eternal and Infinite, Nature, God, etc. not infrequently lacking a clear conceptual form and revealing itself as a feeling of unity with the boundless universe (the notions may often be fragmentary and contradictory, yet they form a specific and always meaningful "dimension" of subjective reality).

To be sure, the above list of correlates is by no means complete, yet in our view it covers on a first approximation the bulk of the "content" shaped by the Other modality and, for that reason, comprises the principal dimensions of the Self modality. Expressed another way, it represents the basic axiological-semantic nodal points of subjective reality, the main types of value and sense parameters inherent in man's spiritual world. It helps reveal the multidimensional character of each of the modalities and of the fundamental structure of subjective reality represented by their mutual positedness and dialectical unity.

A more detailed description of this multidimensional structure would require an extremely complex multistage analysis. Indeed, in order to give a more or less adequate idea of one of the indicated relationships of the Self, it is necessary not only to consider this relationship by itself, but also to characterise it from the angles of all the others. For instance, we shall not be able to understand the attitude of the Self to itself, its own Ego (so familiar to each of us and so vitally important!), if we leave out of account the attitude of the Self to the objective world, to its own body, to another Self, to "Us" and to "Them". It is precisely these relationships that constitute the main axiological-semantic nodes of the content of our Self outside which it remains but a meagre abstraction.

Each relationship taken in the context of the others reflects the whole structure of subjective reality. To illustrate this proposition, we shall try to consider briefly the attitude of the Self to its own Ego. First, however, it is necessary to discuss at least two more bipolarities in the structure of subjective reality which are as crucial for its understanding as the unity of the Self and Other modalities.

2. The Unity of the Reflexive and the Nonreflexive, the Actual and the Dispositional in the Structure of Subjective Reality. Attitude of the Self to Its Own Ego

The notions of the reflexive and the nonreflexive, the actual and the dispositional have already suggested themselves, if only implicitly, in the description of the dynamic relations of the Self and Other modalities and their reciprocal determinations. Yet these notions call for a special analysis which must give a more profound insight into the multidimensional nature of bipolar relations in the structure of subjective reality. The unity of the reflexive and the nonreflexive on the one hand, and the actual and the dispositional, on the other, represents special aspects, special "dimensions" of this structure which show up in the dynamic relations of the Self and Other modalities and at the same time are actualised through one another.

The unity of reflexivity and nonreflexivity expresses the *operational* "dimension" of the dynamic structure of subjective reality. Reflexivity is a conscious reflection (and, consequently, more or less adequate knowledge and understanding) of the content of a given phenomenon of subjective reality—an image, an experience, an inner motive, a subjective symbol, etc. Reflexivity is realised at the present moment even if it refers to a past content. By contrast, nonreflexivity bars, as it were, a given content from conscious reflection (understanding) in spite of the fact that this content is present in the current interval of subjective reality and performs the informative-axiological or motivational-controlling function, or helps exercise these functions. Nonreflexivity is also a characteristic of the present (current) state, though it may refer to the content that is already in the past.

Both reflexivity and nonreflexivity are equally immanent in the Self and Other modalities. Each of them is two-dimensional in this respect, and includes reflexive and nonreflexive content or, better put, the reflexive and nonreflexive layers of a given content. The Self in its actual content and actual activity (in what is being actualised at the present moment) is always reflexive but partially and harbours a good deal of nonreflexive, spontaneous elements. In the current interval, at present, the Self never "surveys" and never "knows" itself completely, and not only because of the multidimensional character of its content which is too big for the sphere now being reflected, but also on account of its historicity, orientation on the future, creative potentiality and the possibility of "unpredictable" formations; the Self is not only what it is now, but also *what it can become*, and its potentialities are not inborn, but also historical and fraught with new formations.

Reflexivity is expressed in the act of self-reflection and in the oriented activity of the Self which constantly goes beyond the bounds of the nonreflexive.* Each new step of reflection uncovers a new layer of the nonreflexive, moreover, reflexivity is capable of producing new varieties of the nonreflexive content (e.g. new ideas and values shaped at the subsconscious level before one becomes aware of them). In turn, the present nonreflexivity sets new objectives for reflexivity and determines the forms of its development. This dialectical unity reveals and actualises itself in the integral dynamic Self-Other reciprocity constituting the source of new creative formations.

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* Of special importance is the unity of self-reflection and self-realisation. From the psychological viewpoint this unity represents, according to Yeliseev, a situation of creative task: "A person comes into conflict with the established image of his Self—an image which may have been correct under the previous set of conditions. A revision of this image may prove too much for him, but its modification, a more realistic assessment of one's Ego, is a crucial factor in the individual's solution of his life problems. It is the royal road of mental development which leads the individual to new life situations and creative experiences of discovering his inadequacy under new sets of circumstances."[5]

Nonreflexive structures and levels of subjective reality coincide in some respects with what is commonly known as the unconscious in the broad sense. This category includes not only subconscious, but also supraconscious (using Yaroshevsky's term) formations, namely, unreflectable logical and axiological structures which in effect determine the course of thinking processes and the evaluation criteria. Very important is the part played by nonreflexive structures in the sphere of motivation and psychic control in general. Hence, a closer look at certain mental phenomena rated as unconscious might give us a better understanding of such a dimension of the structure of subjective reality as the unity of the nonreflexive and the reflexive, and thereby deepen our insight into the nature of the ideal. This is not to say, of course, that every unconscious phenomenon can be included in the category of the ideal: such an abstract statement would be incorrect, as it is based on a confusion of different categorial levels or, more specifically, on the implicit identification of the philosophical and psychological notions of consciousness. Besides, it may give one an impression that I propose a concept of a nonreflexive subjective reality existing alongside a reflexive one, and this at best would be an inaccuracy. Nonreflexivity is not a kind of subjective reality, but its specific "dimension", its structural-operational register. Subjective reality as a whole, as well as each of its intervals is a dialectical unity of the reflexive and the nonreflexive in their multidimensional relations and mutual transformations.

The structural determinateness of subjective reality derives from the unity of the actual and the dispositional—the two basic forms of its existence as a living and developing system. It is impossible to comprehend introsubjective relations outside these forms, therefore they should be clearly identified and considered separately; this will enable us to make yet another step towards a concrete conception of the structure of subjective reality.

The actual is the current conscious experience, the "burning (or, one may add, only smouldering—*D.D.*) torch of spirit", if we may borrow Spirkin's words.[6] Put another way, it is a definite content *which is given me and of which I am aware at the present moment*. It is essentially dynamic not only in the sense that it constantly changes as a whole and in its component parts, but also that it never stops passing into future always remaining "the present". Described in terms of actuality, subjective reality is what is given a man here and now, but remains in a state of perpetual motion, changing and at the same time maintaining its continuum (interrupted only in deep sleep or in a coma and terminated by death). Hence, actualised subjective reality is the immediate present, irrespective of its concrete content which may represent the present, the past and the future.

Subjective reality is unthinkable in its specific quality outside and apart from the immediate present, yet it cannot be reduced to it, as it exists not only actually, but also dispositionally. This latter kind of existence represents all that remains outside the limits of the present, yet in one way or another contributes to the integrity, uniqueness, historical dynamism and other important aspects of the structure of subjective reality. It is always something much bigger than just the immediate present: an individual's experience of injustice at a certain moment stems from deep-rooted convictions underlying his historically conditioned sense of right and wrong. The "content" of these convictions cannot be limited to their expression in the immediate present.

Now, the dispositional is the former actual and its historical result, wherefore it determines the future actual. The content of the immediate present conditioned to a degree by the established dispositional formations is only partly new. The actual constantly passes into the dispositional and builds it up—and sometimes radically and abruptly restructures the whole edifice under a sudden impact of new ideas, mental illumination, or reassessment of values; the dispositional, in turn, constantly passes into the actual and shapes it. Such is, in general terms, the dialectical interrelation of these structural dimensions of subjective reality as a whole and of each of its specific intervals.

It would not be correct to identify the actual with the reflexive and the dispositional with the nonreflexive. Every immediate present is necessarily reflexive, yet not the whole of it, not all its components; there always remains a part of its content which is nonreflexive and can only manifest itself in the next moment, in another immediate present which, however, will again have its own nonreflexive layers and moments. For this reason the actual is always a unity of the reflexive and the nonreflexive. In like manner, the dispositional is always reflexive to a certain extent, since one cannot help knowing something *now* about one's convictions, aims, one's past which determines the present in terms of probability; yet at the present moment many areas and aspects of the dispositional are closed to one.

It is not difficult to perceive that the processes of self-cognition, self-evaluation, self-transformation and self-perfection are linked predominantly with the problem of the dispositional. However, one can consciously reflect, comprehend and purposefully change one's dispositional only actually and through the actual.

Usually the dispositional is described in psychological terms as experience, knowledge, skills and other personal characteristics (abilities, propensities, interests, traits, etc.). As a result, attention is focused on the relative stability of certain structural components of subjective reality, on the moments of invariance in the multiplicity of their actual manifestations. Such manifestations, however, are highly variable and constitute a source of new dispositional formations. Understandably, this historical process, this dialectic of the dispositional and the actual is confined within the dynamic system of the Self-Other modalities and must therefore be comprehended in this and no other context, thereby contributing to a more profound understanding of the above indicated modalities and dynamic unity forming the basic structure of subjective reality.

Now we may proceed to the consideration of the introsubjective attitude of the Self to its own Ego—with due regard for the fact that it includes both the reflexive and nonreflexive, the actual and the dispositional content. In this relation the Self poses as Other, i.e. as an object of self-reflection, self-regulation and self-development. It appears here as *its other Self*, since normally the Self is integral and split at the same time, incessantly positing itself as another Self (Thou) and using it for self-correlation, self-discovery, self-appraisal and self-alteration. Our consciousness is therefore *autocommunicative*, i.e. we constantly monitor and appraise ourselves, argue with ourselves, view ourselves from the side, place ourselves in others' positions, design real, doubtful and downright fantastic images of ourselves, etc. This kind of Ego split is a form of its activeness attesting to a *conversational* character of the process of thinking and of conscious activity in general* which is the most eloquent manifestation of man's social nature.

The attitude of the Self to its Other (Thou) falls under the head of value relations and is an act of value-oriented self-regulation. This introsubjective relationship provides a framework for the formation of the individual's *activeness vectors* and for the realisation of the internal mechanism of appraisal and choice. Indeed, the act of value-oriented self-regulation includes the preassessment and sanctioning of our *volition*, as well as its subsequent appraisal, i.e. *the appraisal of the appraisal*. This relationship is likewise accountable for the operation of factors underlying a state of indecision, doubt and vagueness of volitional intentions.

Continuous internal communication between the Self and its Thou is a manifestation of the necessary connection between a given personality, on the one hand, and another personality, a group of people and society at large, on the other hand. This internal communication reveals itself either as a direct projection of external communication (with other Selves, Us and Them), or as its transformation in certain respects, or as its preparation, planning or anticipation. It is only natural, therefore, that it tends to express itself in a clear intersubjective form. The most intimate internal dialogues implicitly project on external communication and manifest themselves in its sphere in different ways, from allegories, allusions, craftiness, partial or reckless confessions and concrete actions to great scientific, artistic and moral exploits of tremendous creative power.

The interaction of the Self and its Thou is seeing oneself with others' eyes and, in the final analysis, assessing oneself by a definite scale of social values and simultaneously assessing others through the assessment of oneself. Such is the process whereby the Self not only builds up its own image, but continuously shapes its attitude to it.* In this process the Self internalises social values by practically assimilating and transforming them and thus changes its own content and opens up a possibility of its continual self-perfection—or degradation, if it increasingly retreats into the narrow confines of secondary and "false" values losing the capacity for effective assimilation of higher ones.

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* The problem of the conversational character of thinking belongs to a philosophical tradition of long standing. In recent years it has been expertly investigated by M. M. Bakhtin on the materials of literary criticism,[7] and by other authors.[8] Certain important aspects of this problem have also been discussed in philosophical publications.[9]

The content of the Self in its attitude to its own content is multidimensional, as it unfolds, historically explicates itself for itself through all the above mentioned relationships (the attitude to the material world, to its own body, etc.). In all these relationships the Self posits itself as *its Other* in the forms of "knowledge", "assessment" and "action"; the unity of the Self and Other modalities, as well as the measure of their contrariety, remains intact. The identity of a person is contingent on the preservation of this measure: however far the Self may go into its Other, it always returns and remains its own Self.

If this measure is disturbed by pathological destruction of subjective reality, the Self and Other modalities fall apart and become alienated. The "split personality" phenomenon assumes different forms broadly varying in degree and content. They range from individual "alien" fragments of one's Other Self ("alien" sensations and images, "bizarre" visions as, for instance, in the so-called phenomenon of momentary horror when the entire field of vision suddenly fills with bright spots of equal size, or other psychic abnormalities of short duration mentioned above) or transient states of derealisation and depersonalisation arising in extreme situations (for instance, with cosmonauts, polar explorers, speleologists, etc.) to a total "split". In the latter case one's Other Self acquires autonomy, becomes alienated and may not only exist, as it were, alongside and independently of the Self (which is characteristic of the schizophrenic

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* For a more detailed description of this phenomenon see I. S. Kon, *The Discovery of the Ego*, Chapter 3. Significantly, personalities with high creative potentials show particular intensity of this kind of bipolar relations and, paradoxical as it may seem, are notable for coexistence of mutually exclusive intentions and values. Such "creative ambivalence" and "duality" has been convincingly shown by A. N. Luk on vast and interesting factual material.[illegible]

"separation" and "obsession" or "capture"), but also completely substitute for it now and again (the metamorphoses of Eva White's personality is one of the most striking cases of this type[11]).

The pathologic disintegration of the Self and Other modalities throws additional light on the dynamic structure of subjective reality revealing those extremely complex introsubjective relations, ties and mutual transitions which are normally inconspicuous or hardly identifiable. Specifically, certain pathological disturbances convincingly show that the attitude of the Ego to its own Self largely depends on its attitude to the outside world and to its own body. This clearly shows up in those cases when the phenomenon of derealisation traceable to different causes entails the phenomenon of depersonalisation (the loss of one's own identity). This is a typical result of the impaired perception of one's own body, since representations of the bodily organisation constitute one of the basic dimensions of the Self modality and, consequently, pose also as the content constantly referred to by the Self as its Other.[12]

The above-indicated relationship reveals itself even more clearly under conditions of sensory deprivation and in general in those situations when the amount of information coming to a person from the outer world is sharply reduced for a prolonged period. Such a drastic shrinkage of the immediate content of the Other modality causes various abnormalities and disintegration of the Self modality and distorts the attitude of the Self to its own Ego.[13]

In this context mention should also be made, if only in brief outline, of important changes in the interrelation between the Self and Other modalities characteristic of the so-called *altered states*; these cannot be included under the head of pathological destruction as they only take the form of episodes, though sometimes crucial for an individual, occurring against the otherwise normal functional background of subjective reality. What I mean are such diverse phenomena, so far poorly classed, as dreams and states of semi-wakefulness, altered consciousness in deep hypnosis, unusual states of consciousness resulting from meditation or the effect of certain pharmacological preparations (for instance, LSD), states arising at the peak of creative inspiration, love raptures, religious ecstasies, etc. They are notable for a considerable distortion of the structure of immediate present taken in its basic bipolar dimensions.

In dreams the reflexivity range of the content of the Self and Other modalities abruptly narrows and their alternating correlations become inhibited or cease altogether (therefore a person takes for granted what he sees or does in a dream). In a state of deep hypnosis the content of the Self and Other modalities shrinks to the limits set by the hypnotist who also defines the limits of the reflexivity of this content, usually extremely narrow; all the rest is completely nonreflexive. The overwhelming majority of dispositional structures are "fenced off", as it were, from the immediate present; the content of the Self may be reduced to the level of its Other Self (as, for instance, in the case of a hypnotic who received a suggestion that he was a great painter and began to bear himself accordingly, i.e. in compliance with his other Self's idea of a "great painter", a person of exalted position[14]).

Of special interest are the structural features of the "immediate present" in those intervals of subjective reality which may be called *supervalent states* (e.g. the peak of inspiration crowning an act of creation, etc.). Recall Goethe's: "Stop, moment! You are so fair." Such states, in contrast with everyday, often drab consciousness constitute crucial milestones in the history of our subjective reality illuminating, as it were, all our life, providing its justification and giving us the sense of its unity despite the numerous yawning gaps (we do not mention here negative experiences of extreme intensity which are also of enormous existential significance).

All these problems deserve careful consideration as they are connected with many important social phenomena (both positive and negative, e.g. stability of religious consciousness).

Supervalent states differ from one another by social significance and culturological features, value and effect on the structure of subjective reality, and generally by their consequences, source, duration, reproducibility, etc. We shall only touch upon some of them.

The immediate present as a supervalent state reveals three typical variants of structural transformations.

1. Reduction of the Self modality owing to excessive expansion of the Other modality—complete obsession by a definite

object (which may be my Other Self), *self-oblivion* (for instance, at the peak of creative activity). However, the Self modality has not completely disappeared, it clings to the periphery of the reflexive field and, though reduced almost to nought, is energised and saturated on the nonreflexive and dispositional sides to a maximum. Retrospectively, this condition is recaptured in subsequent intervals as the extreme existential fullness of the content and activity of the Self.

2. Reduction of the Other modality owing to the complete occupation of the reflexive field by the content of the Self modality—*oblivion of Other* (in some states of extreme elation,* at the peak of sexual excitement, etc.). Here, too, one cannot speak of a complete disappearance of the Other modality, it can be traced on the borderline of the reflexive and the nonreflexive, the actual and the dispositional, and is extremely rich and meaningful beyond this line. Retrospectively, this state is identified with the exceptional existential fullness of the content of the Other modality.

3. Reduction of both modalities to the extent of their complete fusion, disappearance of any appreciable demarcation between them in the given immediate present (the experience is similar to what we have in the so-called state of semi-wakefulness, yet it lacks the quality of being supervalent). The most striking examples of this state are described by the adepts in oriental meditation practices (Yoga, Buddhist Zen, and others). It is worth noting in this context that their experience despite its religious background deserves a serious scientific investigation as a fact of subjective reality, as a specific supervalent state which is deliberately called forth by appropriate techniques; incidentally, mental states of this kind are not confined to the sphere of meditation proper and figure prominently, for instance, in some aesthetic experiences.**

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* This category of states includes not only religious-mystic and hedonistic experiences, but also a creative purposive impulse—a "capacity for ecstatic concentration of all mental powers"[53] demonstrated by many outstanding poets.

** This is what Russian poet Tyutchev wrote about his experience:

My idle mind has orphaned every thought.
I'm lost in the abyss my soul is,
With nothing outside to brace me and support.

Similar states are described by investigators who have experimented on themselves with LSD under the conditions of sensory deprivation.

A thorough phenomenological inquiry into these states from the position of dialectical materialism appears to be highly topical in many respects. Special interest attaches to the mental state known as "absolute samadhi" and achieved by Zen methods. It is described as "extraordinary peace of mind", "pure existence", "pure experience" in the sense of freeing the immediate present from any specific objective content and, for that matter, from any content in general which might be related to the Self or Other modality.

Yet it is not absolute emptiness; we have here a kind of completely abstract content reflecting somehow the existence of the external world and man, i.e. objective and subjective reality. Zen practitioners usually point out that in true samadhi the person preserves "vigilance" and that the Self, as they put it, "is absent from the stage but awake inside". Hence, this state reveals both modalities, but only on the borderline of the reflexive and nonreflexive, the actual and the dispositional. In retrospect this experience stands out as a period of lucidity.

All the three variants of the above indicated structural transformations represent the so-called *arrested-present* phenomenon with slight modifications in each case. Its essence, however, consists in that a given immediate present comes, so to speak, to a hault, freezes and loses its time dimension.* In ordinary states of consciousness the present continuously flows away and "is no more" at each given moment, so that the awareness of our existence rests on the past and the future. However, under the conditions of the above-indicated structural transformations it is "still there", and this is perhaps what accounts for the unique quality of the supervalent state, the feeling of complete fullness and significance of one's existence in the given interval of the immediate present, i.e the individual's recovery of his own Self in which the Ego attains, as it were, the sought-for absolute identity with itself.

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* The subjective experience of time in these states undergoes an essential change; it also applies to the subjective reflection of space. The problem of the time and space aspects of the structure of subjective reality is of great theoretical interest and calls for a special investigation. The vast and valuable material that has been accumulated in various fields awaits, as it were, a comprehensive philosophical analysis and is already drawn upon for generalisations by representatives of related scientific disciplines."

It is highly significant that the person's attitude to his own Self always displays to a greater or lesser extent the multidimensional structure of his subjective reality. But this means that such kind of relations, unfolding actually and being shaped dispositionally reflect first and foremost the existing structure of social relations, because the attitude of the Self to its Thou reveals itself through its attitude to other Selves, to Us and Them. Put another way, Thou (my second Self) necessarily reflects the general human, class, national and group determinations of a given unique Self, personalises in each particular case the values of a given society, given culture, and represents different social roles (and not only those actually played by the person, but also imaginary ones, those the person "tries on").

In his very illuminating work *The Discovery of the Ego* I. S. Kon has justly observed that the human Ego is a unity in plurality. This plurality reveals itself in actuality and is indeed represented dispositionally as a plurality of a person's relations with his own Self; they are realised, first and foremost, in invariant socio-cultural forms which make the axiological-conceptual framework of subjective reality and, consequently, of the Self. Kon's book offers an expert analysis of this very important structural dimension of subjective reality.*

Alongside the socio-cultural standards the individual's actualised relation with his own Self reveals also the personal-existential aspect, since the content of his second Self carries not only a definite socio-cultural invariant, but also something absolutely distinct as the current awareness of the specific features of his individual existence. The socio-normative and personal-existential are fused here into one. More precisely, the Self unfolding through (and therefore in) a multitude of its Other Selves provides a means for the socio-normative to manifest itself in the form of the personal-existential where it can vary within certain limits and mutate, so to speak, towards simplicity or complexity as the case may be; here lies the source of new axiological-conceptual formations which may *eventually* acquire the socio-normative status.

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* It is also worth mentioning in this context the outstanding ethnographic work of Victor Turner who has studied the rites of African tribe Ndebu.[17] His investigations have revealed with utmost clarity the specific socio-normative structure of individual consciousness in its development.[18] Of great interest is also the historical dialectic of the socio-normative and the personal disclosed by G. S. Knabe on the materials of Cornelius Tacitus' works.[19]

In turn, the personal-existential necessarily shows up in the socio-normative form in view of the tremendous power of the dominant social standards, values and concepts over every individual, as they mould the content and determine the orientation of basic manifestations of a given Self in the capacity of its other Selves, i.e. the value standards, needs, desires, hopes, interests, aims and ideals of a person. This power, however, is not absolute, since man is an active and self-conscious being capable of cognising social reality and his own Self, choosing values of his own free will and reappraising them. Here we have profound dialectical interrelation between the socio-normative and the personal-existential which can only be understood in the context of the analysis of social activity and interdependence of social and individual consciousness. Some aspects of this problem will be discussed later in chapters 7 and 8.

It is in place to mention here yet another important aspect of the individual's relation to his own Self which is indicative of the dynamics of the value structure of subjective reality as a whole. Each of my Other Selves is a personalised value, an axiological content of my Ego representing what I posit as good or bad, kind, just or otherwise, etc. It is what I should like to possess, attain, etc. (not infrequently what others possess or possessed, attained, etc.). The multifacedness of my Other Self is an expression of the variety of axiological value orientations of the Self which must be arranged somehow in an orderly manner to assure their unity. The orderliness here represents a two-dimensional structure notable for a *hierarchical* and *linear* organisations of value. The former may be imaged as a truncated cone so that the higher the rank of the values, the fewer their number. The linear values located on the same levels within this "cone" are not clearly distinguishable by rank and increase in number downward towards the base of the cone.

We are deliberately confining ourselves here to a purely formal aspect of the organisation of values leaving aside the question of their social significance, the true worth of the axiological orientation of a given Self. At this stage we are only concerned with an outline of the general pattern of this dynamic organisation, but the next step, of course, will be the establishment of the social scale and criteria of really topmost values (indeed, the supreme, dominating axiological orientation of a given individual may be towards the vilest, basest or even completely worthless goals). This, however, falls outside the scope of our immediate task—to trace out the main trends in the change and *distortion of the structure of axiological orientations* of the Self which are not only fixed dispositionally but also manifested actually in the plurality of the individual's Other Selves.

Normally, the upper level of the "cone" is relatively stable; the lower the level, the more dynamic and mutable the specific content of values. As the number of lower-level values sharply increases and they tend to spread beyond reasonable limits, the top of the cone caves in, as it were, and the hierarchical structure gets deformed; as a result, the higher axiological intentions degrade so that their control over lower-order intentions slackens or even becomes completely ineffective and the dynamic unity of the self-centring and self-decentring tendencies disintegrates. The latter tendency gains momentum bringing about the so-called *decentred-Self* phenomenon—the individual lands up in the jungle of second-rate things, false needs and low-value communications, and gets lost among them. The Self only retains its identity due to the strengthening of ties between contiguous axiological intentions, whereby it differs from the pathologically decentred Ego.

The opposite extreme is the *supercentred Self* characterised by a rigid hierarchical structure of axiological intentions. This structure which may be likened to a nontruncated cone is notable for an exceedingly low degree of dynamism: the natural tendency to decentring is very weak or not traceable at all, whereas the higher intentions are not infrequently reduced to a single one, like for instance in Lermontov's romantic image of his hero from *Novice*:

> *His mind was chained to one obsession,*
> *His one and single flaming passion.*

Depending on concrete circumstances, the objects of such a passion may be very different ranging from lofty social ideals to most ignominious ends, such as greed of gain, lust for power, gratification of base instincts, etc.

The highest intention of the supercentred Self is determined by the content of a concrete *supervaluable idea* (this term common in psychiatry is also used in psychology to denote the "normal obsession" of an artist, scientist, political figure, etc.).[20] Unlike the decentred Self which may comfortably posit anything as its other Self in view of its conformance to the environment and capacity for indiscriminate absorption of external impacts, the supercentred Self actually posits as its other Self only what conforms to the content of its supervaluable idea and is in this sense purpose-oriented and notably rigid (this quality becomes particularly manifest in the case of a pathologically supercentred Ego when the supervaluable idea acquires a delirious character and, yielding to no corrective action, seizes upon any chance content and gains undivided sway over the individual's mind and behaviour).

Between the two extremes outlined above rank a host of intermediate states,[21] which must be duly taken into account when assessing various developments in the value structure of subjective reality.

3. Analytical Structure Parameters of Subjective Reality

We have so far been considering the structure of subjective reality as an integrated dynamic system. Yet the category of the ideal is also used, as has been pointed out earlier, in respect of any separate phenomenon of subjective reality, i.e. analytically. A number of philosophical problems can be investigated without turning to the system of subjective reality as a whole, and in the context of such investigations the category in interest may be narrowed down. In such cases it also helps bring out, however from a different perspective, the multidimensional character of subjective reality or, if we may say so, its analytical structure parameters. These parameters are also inherent in subjective reality at large and we have implicitly referred to them earlier in the text. At this stage, however, they should be considered on a more regular and systematic basis.

In my view, it is possible to single out five analytical parameters characterising subjective reality in terms of content, form, veracity, value and activeness or volition. Each of them may be called a *structure* parameter as it represents one of the necessary and specific dimensions of any phenomenon of subjective reality. However, they must be viewed as a unitary whole, since an analytical description of individual psychic phenomena cannot be adequate unless proper account is taken of all of them.

Let us now consider each of the indicated parameters separately.

1. *The content parameter* characterises every phenomenon of subjective reality as a reflection of something in consciousness, so its definite reflection is the content of the phenomenon in question. There can be no phenomena of subjective reality without content. It is immaterial if the content is an adequate reflection and if it represents objective or subjective reality.

These statements need some clarification lest they sound trivial and commonplace. The thing is that the content parameter is a unity of the epistemological and ontological aspects and this unity has two dimensions: first, a given content is a reflection of certain reality (epistemological aspect), yet it represents not itself but this reality (ontological aspect). Second, this content *exists* as subjective reality (ontological aspect) and is reflected as such—namely, as a phenomenon of subjective reality with its definite content (epistemological aspect). I have already touched on this question earlier and now want to underscore the bidimensional character not only of the content parameter, but also of all other parameters.

The two last determinations are crucial for the concept of the structure of subjective reality, as they focus philosophical thought on the dynamics of the emergence and existence of a given content (or, better put, the content of a given phenomenon of subjective reality), as well as on the methods of its reflection and description. Regrettably, these questions have so far received but little attention in Soviet literature.

Hence, the study of the content parameter, i.e. the analysis of a definite content of a given phenomenon of subjective reality presupposes its reflection and description. As has already been noted, these two processes must not be identified, since the description of a certain content cannot be attempted without language, whereas its reflection is possible at a pre-language level.

Any content can take shape and actualise only within the framework of the immediate present. For instance, I have seen a cobra in a Zoo for the first time and watched it several times when it came into my field of vision. The content of each of my perceptions of one and the same object may be very different (first I saw the cobra motionless, then creeping away, etc.). Different perceptions of a given object are reworked into the corresponding invariant of its sense image. The content of this invariant includes the averaged, as it were, content of a number of perceptions and the results of active categorisation (investigations show that every perception is categorised, moreover, our categorial sets, the available knowledge and convictions exert a crucial influence on the content of a primary perception, not to speak of the invariant of many perceptions of one and the same object).

I have given this simple example to show that even in such cases the description of the content of phenomena of subjective reality is no simple matter. It becomes much more complex in the case of an unexpected original idea (even if it is original to me only), or of the content of an artistic image, or, for that matter, of the feeling of dissatisfaction with what I have just written. Nevertheless, every phenomenon of subjective reality singled out in one way or another has a definite content which is in principle open to description, though its adequate description not infrequently entails considerable difficulties.

In a first approximation we can distinguish three stages in a description of this kind: first, *primary symbolism* in the internal speech and an attempt to express a new emerging content in the given immediate present with the help of images; second, the formation of a *personal invariant* of this content, i.e. a verbal expression of this content for one's own needs permitting its subsequent identification in one's mind as something familiar, well known and different from other contents. That means that the given content has already acquired a definite dispositional status.

In most cases a new content takes a definite shape and gets fixed dispositionally at the stage of the personal invariant (though frequently a new content initially arises and exists in a nonreflexive form and may function for a while only dispositionally; so far we do not know anything about it and in this sense it is still nonexistent for us: it only comes into being for us at the level of initial actualisation). The formation of the personal invariant is largely confined to inner speech though it tends to overstep the latter's bounds.

Significantly, the shaping of the personal invariant as such does not yet guarantee the intersubjectivity of a given content, i.e. its understandability to another person. Such intersubjectivity is only achieved at the third stage, the *formation of the interpersonal invariant*. Here autocommunication rises to the level of external communication and the content acquires a clear linguistic form of external expression (or a nonlinguistic, but generally recognised sign form) rising to a status of intersubjectivity. Hence, the content parameter representing one of the basic determinations of subjective reality poses specific cognitive tasks, orients the investigators towards the development of methods and techniques of the description of a concrete content, and emphasises the need for inquiry into the dialectic of the subjective and the intersubjective.*

2. *The form parameter* characterises every phenomenon of subjective reality in terms of the internal organisation of its content, since no content can be formless. The diversity of contents of psychic phenomena is also the diversity of their forms, though the range of the former is much broader than that of the latter, as one and the same form may represent different contents. When we speak, for instance, about a perception, we always imply a definite form of the existence of most diverse, from the viewpoint of content, sense images. To be sure, this form cannot be equally adequate for the embodiment of any content(e.g. such as is denoted by the term "quasar energy" or by the term "law"). Hence the problem of the diversity of the forms of the existence and "motion" of the phenomena of subjective reality. Just as Engels distinguished the "forms of motion of thought, i.e., the various forms of judgement and conclusion",[23] one can distinguish the main forms representing the content of subjective reality and providing a framework for its motion and transformation.

These forms are reflected to a greater or lesser extent in common language which accumulates man's centuries-old experience of self-cognition. However, their adequate description and classification, let alone theoretical systematisation, involve considerable difficulties. The scientific description of these forms mainly undertaken in psychological studies falls within the linguistic tradition of formal categorisation which is richly represented in fiction.

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* The understanding of this dialectic is an important prerequisite for a successful criticism of the thesis that it is impossible to get an insight into another person's mind. For instance, Sartre contended that "our subjectivity is unknowable".[24] This thesis asserting the unknowability of *our own* and another person's *inner world* in fact calls in question the cognitive ability of man in general.

Indeed, psychology distinguishes emotions, sensations, perceptions, representations, notions, wishes, intentions, imagination, fantasy, dream, various forms of aesthetic and ethical experiences; much less frequently it concerns itself in hope, faith, love and other complex forms. Yet even comparatively simple forms, such as emotion or perception are classified into a multitude of types and subtypes. Joy, sorrow, wrath, fear, surprise, displeasure and other emotions of a similar nature are also forms, each being capable of shaping and expressing different specific contents.

Present-day psychology faces the task of developing a kind of taxonomy of the forms of existence and motion of psychic phenomena, a very topical task on the practical and theoretical planes, particularly from the standpoint of the deepening of epistemological studies which are not infrequently limited now to the sensuous and the rational and ignore the rest. Such a taxonomy or, to be more precise, *phenomenology* developed from a consistent materialist position should encompass the whole range of formal distinctions—from the so-called somatic subjective reflections (pain, nausea, thirst, etc.) to the highest forms of the organisation of the content of subjective reality (ethical, aesthetic, philosophical and political convictions, etc.).

Hence, the form parameter as one of the necessary determinations of subjective reality turns the researcher's attention to a given form as such, i.e. mentally abstracted from its content and thus poses a special cognitive task—to analyse, describe and classify the forms of the existence and motion of psychic phenomena.*

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* The accomplishment of this task is impossible without a careful critical analysis of various phenomenological constructs and classifications developed by Western philosophers over the past few decades. Contemplating this task, a researcher must be fully aware of the need to concern himself not only with the views of the existentialists and followers of Husserl, but also with conceptions put forward by representatives of other trends.[24]

3. *The verity parameter* characterises every phenomenon of subjective reality on the side of the adequacy of the reflection of the corresponding object. This reflection may be true or false, right or wrong; it may be adequate or inadequate to a greater or lesser extent, in one or another respect. Sometimes we may even have difficulty in determining the degree of adequacy or inadequacy of some reflection, in which case we speak of its indeterminacy. Yet even here we do not overstep the limits of veracity. Though an individual is often a poor judge of his own thoughts or immediate subjective experiences from the standpoint of their truth or accuracy, they are actually never devoid of this parameter being to some extent and in some respects true, right, adequate, or otherwise.

Subjective reality contains a *fundamental orientation* on truth and rightness which functions dispositionally and, as a rule, nonreflexively. In other words, we are permanently "tuned in", as it were, to obtain the adequate knowledge of what stimulates our interest and cognitive activity. The effectiveness of this "truth orientation" is correlated with certain inner criteria of truth, correctness which represent in integral form our experience, the assimilated principles, rules, norms, credos, as well as a number of other values which do not easily lend themselves to an explicit description.

The upshot of such a correlation is either subjective certainty, a feeling of authenticity, veracity, rightness or, on the contrary, subjective uncertainty, a feeling of falsity, etc., with a large variety of shades. These internal sanctioning mechanisms which are far from being perfect screen and pass as "correct" and "true" not only the real achievements of our experience, but also utterly false and patently absurd notions.

The question of the veracity and adequacy of our experience is resolved, of course, outside the limits of a given subjective reality—verification is effected in the sphere of interpersonal communication, social activity, practice. Yet we feel it necessary to underscore the need for a thorough psychological and epistemological investigation of subjective sanctioning mechanisms in order to get a better understanding of the process of assimilation of new content in our cognitive activity. Even true ideas and theories known to have made an epoch in the history of culture *first surfaced* as a phenomenon of a given subjective reality and were verified and elaborated there before they acquired the interpersonal, and then suprapersonal status.

The verity parameter characteristic of the *personal* level of adequacy (inadequacy) of reflection and knowledge in general points to the dependence of the personal level on the *interpersonal* and *suprapersonal* levels of knowledge and, in the final analysis, on the dialectical interrelation of all the three levels—with the creative impulse on the personal level being primary. This parameter accentuates the predominantly epistemological aspect of the problem of the ideal.

4. *The value parameter* characterises every phenomenon of subjective reality in terms of the subject's attitude to it: in other words, this parameter is indicative of the *significance* of the object reflected in consciousness to the given individual. The value dimension present in the phenomena of subjective reality to a greater or lesser extent is a specific quality which cannot be reduced to other dimensions, e.g. to that of veracity. As is well known, false ideas may be of exceptional importance to an individual, whereas true ones may be held by him in very low esteem or even viewed by him as having a negative value.

In this respect the value parameter, like the verity one, includes two poles, the positive and the negative. We have already considered in detail the value dimension of subjective reality, therefore I shall only add here that this parameter mainly brings out the axiological aspect of the problem of the ideal.

5. *The volition parameter* characterises every phenomenon of subjective reality on the active-volitional side, i.e. from the standpoint of *activeness*. It expresses the dimension of subjective reality which may be described as projection into future and as goal-orientation. It represents the active-volitional and creative factors which always reveal themselves in one way or another in any interval of the immediate present and, consequently, in every phenomenon of subjective reality. They represent a specific quality which cannot be replaced by any of the above indicated parameters, though it presupposes their presence. In the language of psychology this quality is described from different angles in such terms as wish, urge, goal-orientation, volitional effort, mental action, internal choice, etc. The essence of this quality is activeness in the broad sense, including its highest manifestation—creative activity.

The volition parameter characterises activeness on the side of its spontaneity as emergence of new formations including essential changes in the direction of volition and methods of its actualisation, as the genesis of ever higher forms. The approach it implies makes it incumbent on the researchers to develop adequate means for the description and explanation of this crucial dimension of subjective reality which provides a clue to the problem of the self-realisation of an individual as a *responsible* subject of social activity. The volition parameter, therefore, focuses attention on the praxiological aspect of the problem of the ideal.

As already noted, any actual phenomenon of subjective reality is nothing else than the immediate present, transitory as it may be. It necessarily brings out each one of the five parameters described above, though, in accordance with circumstances, some of them may be manifested more vividly than others. These parameters are interrelated with one another. Despite the fact that they capacitate analytical description which permits mental abstraction from integral subjective reality, the latter as a unitary whole is characterised by them to no lesser degree than any of its separate phenomena.

Concluding this chapter, I am only too well aware of the tentative character of my outline. It represents but a modest attempt to disclose the structure of subjective reality and I do not claim it to be anything else than an invitation to a serious research into what appears an extremely topical and complex problem.

NOTES TO CHAPTER 2

[1] Some aspects of this problem have been dealt with in: D.I. Dubrovsky, *Psychic Phenomena and the Brain*, Chapter 4, Moscow, 1971; D.I. Dubrovsky, E.V. Chernosvitov, "Concerning Analysis of the Structure of Subjective Reality (the Axiological-Semantic Aspect)", *Voprosy filosofii*, 1979, No. 3; A.G. Spirkin, *Consciousness and Self-Consciousness*, Moscow, 1972; E.V. Chernosvitov, "Concerning Philosophical Analysis of the Structure of Consciousness", *Filosofskie nauki*, 1978, No. 1; idem, "Concerning Philosophical Analysis of Destruction of Consciousness of the Individual", *Filosofskie nauki*, 1982, No. 2.

[2] The authors of a number of publications devoted to the criticism of

the above-indicated philosophical trends touch upon certain aspects of the problem under consideration. See, for instance: P.P. Gaidenko "Man and History in the Light of Karl Jaspers' 'Philosophy of Communication'", in: *Man and His Existence as a Problem of Contemporary Philosophy*, Moscow, 1978; Z.M. Kakabadze, *Man as a Philosophical Problem*, Tbilisi, 1970; M.A. Kissel, *The Philosophical Evolution of Jean-Paul Sartre*, Leningrad, 1976; V.M. Leibin, *Psychoanalysis and the Philosophy of Neofreudianism*, Moscow, 1977; J.J. Matjus, "On the History of the Problem of the Intentionality in Philosophy", in: *Papers of Tartu University*. Research on Philosophy, XVI, Tartu, 1973; N.V. Motroshilova, "The Origin of E. Husserl's Phenomenology and Its Historico-Philosophical Roots", *Voprosy filosofii*, 1976, No. 12; G.M. Tavrizyan, *The Problem of Man in French Existentialism*, Moscow, 1977; L.I. Filippov, "The Problem of the Subject of Historical Creativity in the Philosophy of J.-P. Sartre", in: *Man and His Existence as a Problem of Contemporary Philosophy* (all in Russian).

[3] I.S. Kon, *The Discovery of the Ego*, Moscow, 1978 (in Russian). For a very illuminating inquiry into the same problem in social psychology see also: *The Self in Social Psychology*. Ed. by D.M. Wegner and R.R. Vallacher, Oxford University Press. New York-Oxford, 1980.

[4] V.M. Smirnov, *Stereotaxic Neurology*, Leningrad, 1976, pp. 225-226, etc.

[5] V.A. Yeliseev, "Development of the Personality and the Psychology of Creativity", *Psikhologichesky zhurnal*, 1981, No. 5, p. 163.

[6] A.G. Spirkin, *Consciousness and Self-Consciousness*, p. 74.

[7] M.M. Bakhtin, *Aesthetics of Literary Creativity*, Moscow, 1979 (in Russian).

[8] Yu. M. Lotman, "About Two Communication Models in the System of Culture", in: *Research on Sign Systems*, Issue 6, Tartu 1973 (in Russian).

[9] V.S. Bibler, *Thinking as Creativity*, Moscow, 1975 (in Russian).

[10] A.N. Luk, *Humour, Wit, Creativity*, Moscow, 1977, particularly pp. 172-175 (in Russian).

[11] These metamorphoses are described in detail by I.S. Kon in his *Discovery of the Ego*, pp. 82-83.

[12] An interesting analysis of this relation has been presented by E.V. Chernosvitov in his article "Concerning Philosophical Analysis of Destruction of Consciousness of the Individual" (see Note 1).

[13] F.D. Gorbov, "Determination of Psychic States", *Voprosy psikhologii*, 1971, No. 5; O.N. Kuznetsov, V.I. Lebedev, *Psychology and Psychopathology of Solitude*, Moscow, 1972; A.A. Leonov, V.I. Lebedev, *Psychological Problems of Interplanetary Flights*, Moscow, 1975 (all in Russian).

[14] V.L. Raikov, "Unconscious Psychic Manifestations in Deep Hypnosis", *Voprosy filosofii*, 1978, No. 4.

[15] Stefan Zweig, "Der Kampf mit dem Dämon. Hölderlin. Kleist. Nietz-

sche", in: *Die Baumeister der Welt*, Insel-Verlag, Leipzig, 1925, p. 60.

[illegible] See, for instance: T.A. Dobrokhotova, N.N. Bragina, *Functional Asymmetry and Psychopathology of Focal Injuries of the Brain*, Chapter 5, Moscow, 1977.

[illegible] V.W. Turner, *The Ritual Process: Structure and Anti-Structure*, Harmondsworth, 1974.

[illegible] V.A. Beilis, "Social Drama and Theory of the Ritual Process in the Work of Victor Turner", in: *Socio-Cultural Problems of Adaptation*, Issue 2, Moscow, 1981 (in Russian).

[illegible] G.S. Knabe, *Cornelius Tacitus*, Moscow, 1981 (in Russian).

[illegible] For more detail see: L.B. Dubnitsky, "On Supervaluable Ideas", *Meditsinsky referativny zhurnal*, Section XIV, Psychiatry, 1975, No. 9.

[illegible] See, for instance: K. Leonhard, *Akzentuierte Personlichkeiten*, Verlag Volk und Gesellschaft, Berlin, 1976.

[illegible] J.-P. Sartre, *L'être et le néant*, Librairie Gallimard, Paris, 1957, p. 298.

[illegible] F. Engels, *Dialectics of Nature*, Progress Publishers, Moscow, 1974, p. 223.

[illegible] See, for instance: D.M. Armstrong, *A Materialist Theory of the Mind*, Routlege & Kegan, London, 1968; B. Blanshard, *The Nature of Thought*. In two volumes, Macmillan, New York, 1941; J. Margolis, *Persons and Minds*, D. Reidel, Dordrecht-Boston, 1978.

Chapter 3.

The Psychic, the Logical and the Ideal

1. Reflection, the Psychic, Consciousness and the Ideal

The category of the ideal rests on a solid empirical foundation of diverse psychic phenomena described in common language and in terms of psychology. Though the close relationship of the categories of the psychic and the ideal has never been called in question, we encounter serious difficulties whenever we make an attempt to establish concrete logical links between them. These difficulties stem from the vagueness of the term "psychic" which has different meanings in philosophical publications.

The psychic is frequently equated with consciousness, the mental, the subjective image, or is even used as equivalent of the "ideal" clearly bespeaking the influence of old times when psychology was still a part of philosophy, the science of sciences. Though such word usage need not necessarily obscure philosophical thought, it is bound to render meaningless the conceptual correlation of the psychic and the ideal.

The "psychic" often stands for "psychic reflection" (which also includes the psychic reflection of animals). Sometimes it poses as the central category of psychology embracing the whole range of phenomena that come within the province of this branch of science. In such cases the term is used in the broad and narrow senses, the former implying the psychic phenomena of both human beings and animals, and the latter, only those of human beings.

We shall not go here into a more detailed description of various meanings imparted to the term "psychic" in philosophical literature. In our view, this term is semantically best suited to represent the central category of psychology. It is hardly congruent in a philosophical context where it normally does nothing but duplicates such philosophical notions as consciousness, the subjective image, the sensory reflection, etc. Its use in a philosophical sense is, perhaps, justifiable in one instance only —when we speak about "psychic reflection".

Significantly, the notion of psychic reflection can by no means coincide in range with the notion of the psychic as the central category of psychology (even if we leave aside the specificity of philosophical and psychological notions). The category of the psychic covers not only subjective images and states, but also actions and diverse qualities of the individual (e.g. temperament, character, etc.) which cannot be always classed under the head of reflection without undue stretch of the language. By contrast, the notion of the psychic is mainly applicable to those acts of reflection which manifest themselves in subjective images and states (as distinct from acts of reflection in inanimate nature and in the simplest biological organisms, as well as in certain components of complex biological and social systems which cannot have any sensory perceptions or emotions).

In view of the fact that psychology at present is an independent scientific discipline, the category of the psychic should be ranked with psychological and not philosophical notions. That does not mean, of course, that we deny close links (historical and logical) between philosophy and psychology, between psychological categories and a number of philosophical notions. However, we must never lose sight of the specificity of philosophical problems and, accordingly, the content of philosophical notions. Though such philosophical concepts as consciousness, thought, the ideal, and others obviously lend themselves to a fairly accurate interpretation through the agency of certain psychological notions, the question of the limits of such interpretation remains open to debate.

Preliminary logical analysis of contiguous notions appears to be crucial if only for the fact that the same terms used in philosophy and psychology not infrequently denote very different contents: for instance, the concept of consciousness in the philosophical sense is not identical with the concept of consciousness in the psychological sense. The affinity of the contents of these concepts should not overshadow their distinctions. The philosophical concept of consciousness is more abstract, being normally defined through a logical contrast with the concept of matter. It reflects integrally and in a most general form the diversity of the phenomena of the human psyche, whereas the psychological concept of consciousness is more differentiated, its content is more specific, being conditioned by empirical phenomenology, the description of introspective data and the generalisation of the results of psychological experiments.

In philosophical research psychological notions and generalisations are often highly instrumental in the interpretation, specification and development of purely philosophical propositions and concepts. If anything, it attests to close links between philosophy on the one hand, and science and practice, on the other, as well as to the general and methodological influence of philosophy on social practice and the process of scientific cognition.

Thus, the philosophical analysis of the structure of consciousness, the interrelation of the categories of consciousness and cognition, the sensuous and the rational, etc., is bound to be based on the empirical data provided by psychology, on the latest results of psychological, and sometimes psychopathological, investigations. Profound philosophical analysis of the specificity of sensory reflection is hardly possible in our time without due account of the results of psychological, as well as some psychophysical and psychophysiological investigations into the nature of sensations and perceptions.[1] For instance, no serious inquiry into the dialectic of the sensuous and the rational in cognition can ignore data on the categorial place of any perception, as shown convincingly by Jerome Brune.[2]

All this attests to the existence of substantive links between philosophical and psychological notions and justifies the interpretation of a number of philosophical categories through psychological notions that fall under the category of the psychic. Later in the text the category of the psychic will be used in the narrow sense unless stated otherwise.

It would be absolutely correct to say that consciousness as a reflection of reality is a psychic phenomenon and that consciousness does not exist outside and apart from the mind. This interpretation of the philosophical category of consciousness is not tantamount, of course, to the reduction of consciousness to the psychic. It only gives a more concrete expression to one of the conceptual "dimensions" of the category of consciousness, restricts the sphere of consciousness, establishes the necessary connection between the philosophical understanding of consciousness and the empirical fixation of the phenomena of consciousness both in psychology and in terms of the common language that reflects man's accumulated historical experience in the cognition of his own psyche.

Besides the phenomena of consciousness, the category of the psychic or mental embraces many other objects of psychological investigations, including unconscious psychic phenomena. These are usually described rather vaguely and range from definite states and structures of intellectual activity to psychic regulatory mechanisms of which the individual is obviously unaware. What is more, the very notion of the unconscious psychic appears to be highly controversial causing much disagreement about the interpretation of the term.[3] These issues call for special investigation which goes beyond the scope of our work.

The unconscious psychic phenomena, whatever their interpretations, are generally recognised to be of crucial significance which cannot be sidestepped in a philosophical analysis of consciousness. Yet it would not be correct to relate the notion of the unconscious psychic directly to the philosophical concept of consciousness, all the more so to the category of the ideal. The notion of the unconscious psychic must be related to the psychological notion of consciousness, and it is only in such relation that it can be used for interpretation of the philosophical understanding of consciousness. For this reason abstract attempts to define the ideal as the unconscious psychic appear to be of little value.

Man's psychic activity is an integral system of conscious and unconscious informational processes. The specificity of the notion of the unconscious psychic consists in that it is counterposed to the notion of the conscious psychic. By contrast, the philosophical concept of consciousness covers not only the conscious psychic, but also nonreflexive components and structures of subjective reality, i.e. what is regarded in psychology as a variety of the unconscious psychic. That means that at least some of the unconscious psychic phenomena are essential for understanding the structural, conceptual and process aspects of subjective reality. However, it is only through a detailed analysis that we can identify the unconscious psychic phenomena related to subjective reality and to reveal the closeness of their ties. The abstract affirmation that all unconscious psychic phenomena fall under the category of the ideal appears to us erroneous in principle.

We shall, in due course, explore these issues in greater detail, but for the moment we need to clarify just one point of theoretical significance—the difference between the notions "the psychic" and "the psyche". The former characterises any separate mental phenomenon, such as sensation, emotional state, thought, etc. which can be analytically singled out, as well as their various synthetic combinations; the latter only expresses a concrete integrality of mental phenomena. For instance, sensation is a mental (psychic) phenomenon, yet it is not the psyche itself, it is but one of its components. It would not be correct to say that every psychic phenomenon is the psyche, though any psychic phenomenon only exists as an element, a fragment of the psyche. On the other hand, for all its structural complexity the psyche may be viewed as a separate phenomenon and treated in an abstract way as a unitary whole (e.g. subjective reality), in which case it falls within the broader concept of the psychic.

Every separate psychic phenomenon bears the stamp of the integrality from which it has been extracted. This integrality lends itself to different methods of quantisation and may be broken up into different sets of separate psychic phenomena which are posited as empirical objects of investigation and then restored, on a theoretical basis, to the initial unified whole.

The notion of psyche in psychology taken as an integrity (always personal, individuated) is commensurate with the philosophical notion of subjective reality as a single mental complex including various components. When we speak of a psychic phenomenon, we always mean that it is a component of the psyche or the psyche as a whole. In like manner, an ideal phenomenon implies either subjective reality as a whole, or its separate components.

From conceptual considerations it often becomes necessary to clearly state the concrete meaning of the category of the ideal in a given context indicating if it denotes subjective reality as a whole or just one of its phenomena. For instance, when we say that consciousness is ideal, we usually imply subjective reality as a unitary whole, whereas in the expression "sensation is ideal" the focus is on a separate phenomenon. These two aspects of the content of the category of the ideal represent a dialectical unity.

The analytical plan of the category of the ideal is very important in the investigation of the structure of subjective reality, its internal diversity, as well as in the delimitation of different approaches to the problem of the ideal for subsequent analysis of their scientific value. Thus some authors, firmly caught up in certain classical traditions, limit the ideal to the abstract-logical and conceptual-universal. This approach denies the attribute of ideal to sensations, sense images, emotional experiences and lands the researchers on the rocks of theoretical inconsistencies causing them to reject the concept of the ideal as subjective reality.

The analysis of the category of the ideal from the standpoint of its content entails a specific task of interpreting the phenomena of subjective reality through psychic phenomena, i.e. calls for a specific correlation of the categories of the ideal and the psychic. In my view, every phenomenon of subjective reality should be interpreted as a psychic phenomenon—which does not mean, of course, that every psychic phenomenon (or, the more so, every unconscious psychic phenomenon) may be interpreted in terms of ideality. In like manner, all characteristics of subjective reality as an integral whole may be fruitfully interpreted in terms of psychological characteristics.

Hence, the philosophical notion of consciousness and, consequently, the notion of the ideal cannot be regarded as being broader than the notion of the psychic. The thesis "consciousness is a psychic phenomenon" has a profound meaning from the standpoint of the general world outlook and methodology. Its main thrust is against the objective idealistic and dualistic interpretation of consciousness (and the ideal) as a separate entity residing outside the psyche of real individuals in the manner of a mystic spiritual substance.

The above-indicated thesis plays a very important methodological part in the analysis of the problem of consciousness and is crucial from the social historical viewpoint, restraining attempts to divorce consciousness from the conscious activity of social individuals and identify it with the objective results of this activity, with social materiality as such. *Consciousness (the ideal) is inalienable from the psychic* and does not exist outside and apart from the psyche of real social individuals.

2. The Psychic, the Logical, the Ideal. Untenability of Radical Antipsychologism

The divorce between the categories of the ideal and the psychic mainly results from the identification of the ideal with the logical and refusal to regard the ideal as a psychic phenomenon. Such an approach to the problem of the ideal is an upshot of a broader theoretical conception which may be called radical antipsychologism. It dates back to the Pythagoreans and Plato and runs through the theoretical thinking of all adherents of objective idealism. The logical as the universal and the necessary indeed has a strong appeal to a scientific mind as it is really independent of current psychic states of an individual and poses as something suprapersonal and obligatory for every concrete thinking process. This characteristic becomes crucial in logic and mathematics where not infrequently it has a Platonic ring. Such absolutisation of logical and mathematical forms is traceable in Gottlob Frege and George Cantor and, among philosophers, in Edmund Husserl, Karl Popper and others. This attitude was partly a reaction to extreme empiricism, predominantly of the positivist variety, that gained wide currency in the Western philosophy of the late 19th and early 20th centuries with its attempts at a psychological substantiation of logic and epistemology (recall, for instance, John Stuart Mill).

The blind alleys of psychologism and antipsychologism in the history of philosophy and logic deserve special investigation that goes beyond the scope of our subject. However, it is worth noting in this context one very characteristic detail: the radical antipsychologists' arguments that brought into the limelight a number of epistemological problems, helped reveal the specificity of logical and mathematical propositions and proved instrumental in the critical analysis of positivist empiricism with its attempts at "psychologising" philosophical knowledge, but at the same time were not infrequently used to give a new lease of life to objective idealism.[4] Though the irreducibility of the logical to the psychic appears to be evident, the difference between these categories should not be absolutised. They are always interrelated, and the analysis of their essential links is very important from the methodological and world-view standpoints.

In what sense are logical (and mathematical) constructs independent of the psyche? In the sense that they are reflections of objective relationships of reality and practical activity, of the laws of the objective world and cognitive thinking. Every logical construct or form is a socially recognised result of the reflection of a definite relationship, an essential property having a universal (or at least very general) character for a given sphere of objective reality. It is true not only of logical and mathematical forms, but also of any philosophical and scientific (general and specific) category. The results of such true reflection are objectified in corresponding sign and other material systems, in practical actions, in social activity in general, as well as in "ready-made" objective and communicative structures.

It is only as such objectively validated reflections that logical forms are independent of an individual's psyche, i.e. of his current mental states, wishes, assessments, volitional intentions, his character, temperament, memory, etc. The independence of logical forms also shows up in a possibility of their alienation from the human psyche and objectification in a system of graphic symbols, a computer programme, a machine design, etc. Logical forms may also be deobjectified, for instance, in the process of the individual's study, the assimilation of cultural values whereby they become an immanent factor in the individual's subjective reality and, as such, begin to shape and regulate his thinking.

However, in all indicated cases the independence of the logical from the psychic is relative. A logical construct (a category, a principle, a rule) is a result of *human* reflection and, consequently, is necessarily connected historically and actually with the thinking and conscious activity of people. There is no thinking or conscious activity outside and apart from the psychic. Any logical form is a form of thought, a form of cognitive activity and its product. The objective existence of a certain property (relationship, regularity) reflected and fixed, as it were, in a logical form is by no means tantamount to the existence of the logical form itself outside and independent of our mind.

If the opposite were true, we would have to recognise absolute identity of a given logical form and the objective relationship reflected in it and, in the final count, absolute identity of the totality of logical forms (in logic, philosophy, natural science) and the totality of universal properties, relationships and regularities in objective reality itself. Should we come to a conclusion that the sum total of the existing interrelated logical forms (i.e. those that can be described in terms of logic, philosophy, science, common language) are identical not with all actually existing universal properties, relationships and regularities, but only with a certain number of them that are actually known, we would evidently be bound to regard those that have not been cognised and reflected in logic (philosophy, science) as *unknown logical forms* (their existential status in man's actual thinking being unclear).

As a result, we would have to admit the existence of primordial logical forms preceding the thinking of any individual, the forms representing the steadfast, abiding substance of thinking identical with the substance of objective reality. In other words, we would have to reduce the cognition of reality to the mind's cognition of itself and get ourselves into the rut of the age-old Platonic or, when appropriately modified, Hegelian scheme.

However, if we postulate the existence of so far unknown objective laws (which is only too natural) and the possibility of existence of their logical counterparts which are not yet represented in our thinking but may be formed in the process of ever deepening knowledge of reality, we at once lay bare the untenability of the Hegelian principle of the identity of thought and being and set the problem of the logical form in a new perspective ruling out the possibility of its mystification along the lines of objective idealism.

Indeed, what we call a logical form is inherent in thought and not in objective reality as such. A logical form reflects reality but exists only in thought. In concrete acts of thinking one or another logical form need not necessarily be reflected. Being logical by nature, such a form should be singled out and described by the corresponding scientific discipline (dialectical logic, mathematical logic, etc.). New logical forms are products of the research activity of concrete individuals (like any new ideas with objective content that further the advance of scientific knowledge). Epitomising the achievements of scientific thought, new logical forms simultaneously make it richer and more effective in the solution of various research problems as is attested to, for instance, by the development of modal logic and other latest trends in logical investigations.[5]

The logical form is only ideal as a form of thought which, according to Engels, "exists only as the individual thought of many milliards of past, present and future men".[6] But the individual thought is a mental process, so the ideality of logical forms consists only in that they are represented in definite psychic (thinking) processes of real individuals. This fundamental fact must never be lost sight of if we are to adhere to the definition of the ideal as subjective reality and to rule out once and for all any possibility of idealistic hypostatisation of thinking, logical forms and the category of the ideal in general.

There is no such thing as suprapersonal and extrapersonal thinking; thinking is always personal, though its logical forms, its normative character are suprapersonal. Indeed, man is a social being and his thinking is a social act, i.e. it is conditioned by language, interiorised cultural values and participation in interpersonal communication. Thinking is realised through the acts of deobjectification and objectification, the latter being essentially normative as they provide generally recognised, socially (practically) validated forms for the specific thought content. These meaningful logical forms are immanent in the process of thinking though they seem to be constantly imposed upon it as something alien, for they have their own socio-objective (and socio-structural) mode of other-being. Such material other-being of logical forms is nothing else than the objectification of the results of past thinking embodied in a definite orderly pattern of material and energy components.

The content of an actual process of thinking as an ideal phenomenon is constantly objectified in linguistic, material and operational forms and turns into the content of social objects and processes, i.e. becomes materialised in the objective world. Such objectified results of past thinking are a necessary condition of any present thinking. Moreover, the constant process of objectification and alienation of the results of man's thinking goes side by side with the opposite process of their deobjectification and internalisation (at least in linguistic forms). Thus there can be no socially significant thinking process without the involvement of extrapsychic socio-material factors and means. That does not mean, however, that we should identify actual thought and its logical forms with all these material conditions, means and results of the realisation of a thinking process. The latter remains essentially a psychic process and for this reason alone falls under the head of the ideal.

As regards logical forms, it must be admitted that at least some of them may not only assume a material form (transforming into a definite objective relations between different components or functional properties of a thing), but also become embodied, for instance, in a diagram, an algorithm realised through certain relationships of physical variables, and so on. To be sure, there is nothing ideal in logical operations performed by the computer, though they may be a replica of certain logical thought operations.

In like manner, every more or less difinite system of knowledge objectified and estranged from man by different methods may be stored and even function, in one way or another, in non-psychic forms.

Criticising Popper's conception of the "third world", A. I. Rakitov convincingly shows that the property of "being a knowledge" is necessarily linked with the concept of consciousness and human activity. "Popper's chief error consists in that he regards sign systems or, more accurately, scientific texts as knowledge per se, irrespective of other non-sign phenomena, on the one hand, and of definite types of human activity, both intellectual and objective-practical, on the other hand."[7] As a result, sign constructs taken out of the context of their relations to objects they represent, to human consciousness and activity turn into fragments of the "first world" (ibid., p. 109).

The category of the ideal does not characterise knowledge merely as a set of data, as a reflection (the latter may be completely material); rather, it focuses on its mode of existence, namely, on its original, initial state, its manifestation (and creative transformation) in living thought, i.e. in the form of subjective reality.

However, knowledge taken as information, as a definite content, can also exist in the form of objective reality, i.e. it can be objectified knowledge. Here the content existing originally in the form of subjective reality remains intact but is represented by objective code relationships, code patterns of material processes rather than in subjective images and ideas. In the process of deobjectification this material knowledge, the content of the socio-material object again assumes the ideal form. Hence, the ideal cannot be carried beyond the bounds of the psychic, for there begins the domain of the material.

Every subjective reality is a psychic phenomenon, yet not every psychic phenomenon is subjective reality. Some classes of psychic phenomena (e.g. temperament, practical actions, and so on) cannot be coherently included into the category of the ideal. At the same time the sphere of the psychic representing subjective reality encompasses very diverse phenomena. Not only sensual pleasures or fleeting images, but also strict logical reasoning of a mathematician proving a theorem are psychic processes. The discourse of a philosopher on extremely abstract things is also a psychic process. Any modifications of scientific notions and theories are initially effected in the mind.

All these facts show that under the head of the psychic come mental operations related to cognition and evaluation. However, though the conception of the ideal as a psychic phenomenon is incompatible with the basic premises of radical antipsychologists, it does not imply the reducibility of logic, epistemology and axiology to psychology. What it does imply is the need for logic, epistemology and axiology to be fully aware of close ties between their objects and the phenomena of subjective reality described in terms of psychology and common language. Such awareness would be a constant reminder of the relativity of most indisputable logical, mathematical and scientific truths, a reliable safeguard against the absolutisation of our knowledge and turning its objectified forms into a fetish. Any knowledge we may have is only *human* (or lacking in humaneness!), but there are no bounds to inquisitive and creative human thought.

The psychic nature of the ideal underlies the unity of extremely diverse phenomena of subjective reality and is accountable for the conventional nature of any analytical division or synthetic integration of man's continuum that has been or ever will be

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attempted. It is incompatible with the notion of the ideal as something open only to abstract thought, something logically necessary and universal. Radical antipsychologism tends to hypostatise the necessary and the universal which is inherent in available knowledge and to restrain within its narrow confines the insatiable, ever searching human spirit. This sterile temple of the necessary and universal where everything is ordered once and for all has no room for restlessness of the mind and creative search, for new historical formations, for human perspective which is always oriented on a *new kind* of the *universal* and the *necessary*.

The history of radical antipsychologism shows that its expounders have never been consistent. Even the most prominent representatives of this trend were at loggerheads with the rules of logic and proved unable to dovetail their theoretical premises. For instance, Husserl's conception based on the ideal of apodictic knowledge and the corresponding method of ideation (expressing the postulate of radical antipsychologism) peacefully coexists with the method of "intentional analysis" resting on the results of psychological research.[8]

The excessive contrast between the categories of the ideal and the psychic, the reduction of the ideal to the universal and the necessary are bound to create considerable theoretical difficulties, largely artificial. Rightly criticising attempts to view epistemological problems exclusively in terms of psychology, M. Kissel goes, in our opinion, too far in his otherwise illuminating book when he says: "The content of our knowledge is ideal, i.e. does not depend on the concrete conditions of place, time or specific circumstances of cognition. The ideality of knowledge in this sense means nothing else than its universality and necessity whereby, for instance, schoolchildren of the socialist society understand the geometry of Euclid who lived in antiquity, i.e. under entirely different historical conditions."[9]

In our view, it is hardly correct to give the category of the ideal such restrictive interpretation. Not every knowledge has the merit of universality and necessity. Not infrequently it is particular and probable; what is more, the truth of some propositions "depends on concrete conditions of place and time". If such knowledge cannot be rated as ideal, it must be included under the category of the material, which is absurd.

It would be more consistent to call ideal any knowledge existing in the form of subjective reality. The category of the ideal includes all phenomena of subjective reality. It embraces not only knowledge, but also many other modalities of subjectively experienced states that do not lend themselves to a simple classification, but are described in psychological terms and in common language, expressed in art and by methods of extralinguistic communication. Suffering, anxiety, pleasure, faith, hope, aspiration, aesthetic feelings, the sense of justice and so on—all these experiences alongside thoughts, images and numerous existential states are phenomena of subjective reality closely linked with one another in its integrated structures.

A broad interpretation of the category of the ideal was characteristic of Engels who included under this term very different manifestations of the human psyche. "The influences of the external world upon man express themselves in his brain, are reflected therein as feelings, thoughts, impulses, volitions—in short, as 'ideal tendencies', and in this form become 'ideal powers.' "[10]

As we see, Engels interprets the ideal in psychological terms for it is the only way to understand the internal diversity of subjective reality. Such interpretation lays bare the oversimplification of the logistic models of the mental, the primitivism of pseudoscientistic debasement of spiritual integrity and complexity reducing it to a single dimension—reflective-logistic. It paves the way for an integrated approach to all principal dimensions of the spiritual, the ideal—*reflective-cognitive, axiologico-existential* and *creatively active*. Without a unity of these dimensions we can hardly expect to comprehend the nature of cognitive activity, of logico-theoretical constructs and their place in the spiritual activity of man.

3. The Ideal as the Unity of Epistemological and Ontological Aspects

As is known, dialectical materialism is opposed to a rigid demarcation between ontology and epistemology so characteristic of pre-Marxist philosophy. For this reason, the category of the ideal, like any other category of dialectical materialism is conceived as a unity of epistemological and ontological aspects. Of course, this unity permits their theoretical separation and special analysis so that each aspect may even be treated as a separate subject. Such a separation is not only permissible, but even necessary when philosophical inquiry focuses, for instance, on a definite form of motion of matter or on forms and methods of cognition. However, any ontological statement (i.e. an assertion of an object's existence) evaluated in terms of meaning and verity presupposes reflection of those cognitive means that were instrumental in its formulation. On the other hand, any epistemological statement (asserting the existence of certain knowledge about something) is based, explicitly or implicitly, on definite ontological prerequisites which are bound to be brought to light if we are to make any advance in the solution of epistemological problems. All this clearly attests to the insoluble unity of the ontological and epistemological aspects of philosophical knowledge.

Besides the ontological and epistemological dimensions, there exist no less important axiological and praxiological dimensions which respectively characterise the ideal in terms of value and spiritual activeness (goal-setting, volition, creative intentions, etc.).

Let us briefly consider the ontological and epistemological aspects of the category of the ideal with due regard for their necessary interdependence.

The ontological aspect is related to questions of *being* (such as what exists, where, how, why), whereas the epistemological aspect covers the questions of reflection, *knowledge* as such (the methods and means of singling out and cognising a definite object, their adequacy, the truth or falsity of self-reflection, etc.).

The analysis of the category of the ideal reveals a two-dimensional character of each of the above aspects. From the epistemological standpoint, the ideal, i.e. subjective reality is, firstly, a reflection of given objective reality and a projection of future objective reality and, secondly, a reflection and a projection of itself. Consciousness is reflexive by nature and includes self-reflection necessarily connected with the reflection of an external object and essential for the understanding of this reflection. In actual investigations, however, the researcher's attention is usually focused on the process, methods and results of the reflection of objective reality, whereas the specificity and the means of the reflection of subjective reality often remain in the background (the importance of this latter aspect for the theory of knowledge is indubitable).

From the ontological standpoint subjective reality being a reflection of objective reality is indicative of the existence of certain things, phenomena, processes outside our mind (for instance, a sense image of a house is indicative of its existence confirmed by practice). This example, simple as it is, clearly demonstrates the necessary connection of the ontological and epistemological aspects. Any statement affirming the existence of something is certain knowledge which must often be preceded by careful epistemological analysis. At the same time subjective reality being an individual's consciousness is the reality of his inner world which is no less authentic to him than what exists outside and independent of his mind. If we may borrow Melyukhin's apt remark, "this internal subjective reality is frequently not less important for a man than any material things in the external world."[11]

The category of the ideal represents a unity of all the abovementioned sense dimensions, namely, the unity of the elements expressing the *reflection* and *projection*, and the elements expressing the *existence* and *development* of objective and subjective realities. Each of the four sense dimensions, though revealing itself through all others is a separate field of investigation into the nature of the ideal. The problems related to the existence and development of subjective reality as man's inner world have so far received very little attention in our literature. The exploration of these ontological problems brings into the foreground the corresponding cognitive facilities, i.e. the means of the adequate reflection and effective projection of subjective reality, and calls for their analysis and further improvement. This again brings out the fundamental unity of the ontological and epistemological aspects of research without excluding, however, the specificity of the analysis of subjective reality on the ontological plane.

In such analysis attention is focused on the nature and specificity of the phenomena of subjective reality, the main forms of their existence, the value structure of subjective reality and the ways of its transformation. A pure epistemological approach to these problems is not sufficient, as it is limited to the analysis of sensuous and discursive components of the cognitive process and usually ignores the spiritual life of a social individual in his wholeness, i.e. as a unity of axiological, intuitive, emotional, goal-setting and volitional components. A subject viewed only from the epistemological angle is but a shadow of a real man actively and creatively engaged in cognitive and practical activity.

Therefore the investigation of subjective reality as man's internal world calls not only for the epistemological, but also for the axiological approach, as well as for a special analysis of its structure and active self-transformation. It is only under such conditions that we may expect the category of the ideal to reveal its multidimensional character.

Leaving aside this question for discussion in subsequent chapters, I shall make here just one observation. The notion of subjective reality relates both to man's inner world as a whole and to any separate phenomenon of this world singled out in common language or in psychological terms (thought, representation, belief, wish, etc.). For the time being we shall not distinguish between these meanings, as it is proper to consider first subjective reality as a whole, if only in general outline.

Our consciousness is intentional, that is always directed towards a certain object. Therefore subjective reality represents a definite "content" set by outward intention (orientation towards an external object) or by inward intention (orientation towards an internal object—a thought, an assessment, an impression, etc.). Put another way, every act of consciousness includes both these differently oriented intentions and, consequently, the content of subjective reality in a given time interval is always a unity of the outward and inward intentions, one of them being dominant.

Generally speaking, subjective reality may have any content. We can speak of the criteria of existence only in relation to phenomena of objective reality, but the content of subjective reality cannot be restricted by any criteria. Even the most bizarre, chimerical products of phantasy, arbitrary mental restructuring of real images, hallucinatory states of a sick man come under the head of subjective reality. Such "tolerance" is characteristic only of subjective reality and serves as one of the chief reasons for its opposition to objective reality.

In order to have a better understanding of epistemological and ontological aspects of the category of the ideal, one must take due account of the difference of the terms "objective" and "subjective". They are not rigidly tied to "objective reality" and "subjective reality" respectively. The term "objective" is used in a number of meanings different from "objective reality". It would not be correct to identify the "object of cognition" with "objective reality". Firstly, not every objective reality is an object; the latter denotes only those phenomena of objective reality which have already come, in one way or another, within the sphere of reflection and are included in the sphere of human activity. The notion of object is directly related to the notion of subject. Secondly, a phenomenon of subjective reality can also be an object. The object is posited by the investigating subject as existing outside and independent of his mind and in this sense is objective to him. Yet a phenomenon of subjective reality does not pass into the category of objective reality merely because it became an object of study for the simple reason that it does not exist outside and independent of man's consciousness.

A peculiar situation arises when a man tries to assess his own thoughts, analyse his impressions or attempts to understand his motives. Such self-cognition is a kind of cognition in the broad sense and the person poses here as the subject and the object simultaneously. The latter is subjective reality, yet it cannot be regarded as existing outside and independent of the consciousness of the investigating subject. This problem has been discussed in detail in the chapter devoted to the structure of subjective reality and I only recall it in this context in order to underline the specific character of the relationship between the ontological and epistemological aspects in the investigation of subjective reality.

The term "objective" is also used to denote the true or "objective" content of subjective reality, i.e. the adequate reflection of objective reality in our knowledge. It is contrasted in this sense to "subjective" content, i.e. a false thought, an erroneous opinion, an arbitrary assumption. Subjective reality includes both notions. A false thought is also ideal and not material. Hence, the category of the ideal is defined independently of the category of truth and characterised not only in terms of veracity, but also in terms of value.

There is yet another meaning of the term "objective" which shows up when we say that every phenomenon of subjective reality is always objectified in one way or another, exists only as a property of a highly organised material system. Using the term in this sense, we underscore the necessary connection between the ideal and the material. By objectification is also understood the process and the result of the materialisation of thought, the ideal. What is meant here is transformation of the ideal into the material. These questions will be discussed later.

In all the cases indicated above each meaning of the term "objective" is correlated with the corresponding meaning of the term "subjective".[12] A closer examination reveals the inadequacy (and contradictoriness) of the rather common scheme of subjective-objective relations in which the object is viewed exclusively as objective reality and the ontological aspect of the investigation is taken into account only in the description and explanation of the phenomena of objective reality. Thus the specificity of the phenomena of subjective reality taken as the object of investigation is ignored which results in the oversimplification of the models of the cognitive process (as such models fail to take proper account of the specificity of subjective reality which alone provides the framework and the means for the formation of the "objective content").

The category of the ideal having interdependent epistemological and ontological aspects preserves its logical opposition to the category of the material in both its aspects, and not only on the epistemological plane. The contrast of these categories on the ontological plane highlights the specificity of subjective reality and brings it in the focus of investigation *as a specific object* different from objective reality. Such a logical opposition does not mean, of course, that the ideal resides somewhere outside the bounds of the material world and is something external to it. The ideal is *nothing more than subjective reality*.

For this reason the category of the ideal is by no means alien to the system of dialectical-materialist monism. The unity of the world consists in its materiality. From the standpoint of Marxism the world can only be described in terms of its real objective existence. Lenin's statement that there is nothing in the world except moving matter only means that the world is all-embracing objective reality and not that the mind does not exist. It is non-existent as objective reality since it is ideal, i.e. represents subjective reality. The Marxist conception of the ideal does not contradict the principle of Marxist monism.

The conception of the ideal as subjective reality is contrasted with all classical non-Marxist solutions to the problem of the ideal and, consequently, to the basic question of philosophy. Indeed, this conception is counterposed to: (1) *objective idealism* which regards the ideal, spiritual as primary all-embracing objective reality and views the material, the natural, as nothing else than the other-being of spirit; (2) *subjective idealism* which denies (if it remains true to its basic premises) any objective reality and affirms subjective reality as the only existence; (3) *dualism* which recognises the existence of two realities—spiritual and material, capable of interacting with one another, but remaining essentially independent; (4) *vulgar materialism* and radical physicalism of the so-called scientific materialists. The proponents of the latter reject subjective reality in its specific quality and seek to identify the ideal and the material in every respect, thereby eliminating the ideal from reality and from scientific language as superfluous, imaginary and mythological. In their eyes the admittance of the ideal into the system of philosophical categories is tantamount to an outright betrayal of materialist monism; any attempt at contrasting the ideal to the material is unconditionally qualified by them as siding up with dualism or idealism (the conception of scientific materialism will be discussed in more detail in the next chapter).

In contrast to all these trends dialectical and historical materialism regards the ideal, subjective reality as a specific, unique property of highly organised material systems, as one of the principal manifestations of the social individuals' ability to act. By virtue of its uniqueness among other properties of material systems and in view of its crucial significance in the life of social individuals (and, consequently, in the life of society in general) this property is singled out and counterposed to other properties of material systems, to everything that exists as objective reality. Such logical counterposition is an indispensable theoretical prerequisite for the setting and investigation of the problem of the ideal as one of the pivotal issues in contemporary philosophy.

NOTES TO CHAPTER 3

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8 Z. M. Kakabadze, *The Problem of "Existentialist Crisis" in the Transcendental Phenomenology of Edmund Husserl*, Tbilisi, 1966; T. I. Oizerman, "Towards Critique of the Phenomenological Conception of Philosophy", *Voprosy filosofii*, 1975, No. 12. An interesting critical analysis of Husserl's antipsychological arguments was provided in: J. W. Meiland, "Psychologism in Logic: Husserl's Critique", *Inquiry*, 1976, No. 3.

9 M. A. Kissel, "A Critical Analysis of the Positivist Conception of the Unity of Sciences", p. 21.

10 Frederick Engels, "Ludwig Feuerbach and the End of Classical German Philosophy", in: Karl Marx and Frederick Engels, *Selected Works* in three volumes, Vol. 3, Progress Publishers, Moscow, 1976, p. 352.

11 S. T. Melyukhin, *Matter in Its Unity, Infinity and Development*, Moscow, 1966, p. 53.

12 For a more detailed analysis of the relationship between the objective and the subjective see: V. A. Lektorsky, *Subject, Object, Cognition*, Moscow, 1980; V. F. Kuzmin, *Objective and Subjective*, Moscow, 1976; T. A. Kuzmina, *The Problem of Subject in Modern Bourgeois Philosophy*, Moscow, 1979; K. N. Lyubutin, *The Problem of Subject and Object in Classical German and Marxist-Leninist Philosophy*, Sverdlovsk, 1973; N. I. Sychev, *Objective and Subjective in Scientific Knowledge*, Rostov-on-the Don, 1974 (all in Russian).

PART TWO.

THE IDEAL AND THE MIND-BRAIN PROBLEM. CRITIQUE OF "SCIENTIFIC MATERIALISM" AND SUBSTANTIATION OF AN ALTERNATIVE CONCEPTION

Chapter 4.

"Scientific Materialism" and the Mind-Brain Problem: A New Attempt at Discarding the Category of the Ideal

1. The Main Features of "Scientific Materialism"

The new philosophical trend known as "scientific materialism" appeared in the West a few decades ago and has been in the ascendant, particularly in the USA and Australia, ever since. Its adherents (Herbert Feigl, John Smart, David Armstrong, Richard Rorty and others) declare themselves champions of the materialist world-view and many of them castigate idealism and dualism in a broad debate upon the mind-brain problem. The "scientific materialists" in the person of their most eminent representatives seek to solve this problem from the position of radical physicalism. In contrast with the adherents of idealism and dualism who absolutise the category of the ideal, the "scientific materialists" strive at all costs to discard it altogether as false and meaningless. To them the ideal (consciousness, the mental, the psychic) is nothing more than a physical process. The theoretical premises of "scientific materialism" which purports to uphold the fundamental principles of materialist philosophy deserve a careful critical analysis.

A characteristic feature of "scientific materialism" as a philosophical trend consists in its conceptual orientation towards the classical mind-body problem treated in the naturalistic manner. This problem, known as psychophysical in relevant literature has a long-standing philosophical tradition. Whatever its interpretations, it is closely related to the basic question of philosophy and, precisely for this reason, figures prominently in the works of Western philosophers. Time and time again it was declared a pseudo-problem, yet, according to Jerome Shaffer, the author of the corresponding article in *The Encyclopedia of Philosophy*, it "remains a source of acute discomfort to philosophers".[1] Ever since the time of René Descartes, if not even earlier, the mind-body problem has exercised the minds of the empiricists, and the achievements of psychology, physiology, medicine and cybernetics over the past few decades have given it a new lease of life which largely accounts for the emergence of "scientific materialism".

It is highly significant that the question of the relationship of the mental and the physical is directly linked with two other fundamental problems: the nature of man and the unity of scientific knowledge. These links have always been underscored not only by leading representatives of "scientific materialism", but also by their opponents. Hence the heated controversy over the conceptions of "scientific materialism", their methodological and world-view significance.

Central to "scientific materialism" is the thesis that man is essentially a part of nature and, consequently, a physical object; therefore, "...the methods of natural science, in particular physics, can be counted upon to give a comprehensive description of a human being".[2] In other words, mental phenomena are essentially identical with physical phenomena and should be regarded as a subclass of the physical. The possibility of complete reduction of the mental to the physical can be proved on a strictly scientific basis—hence the name "scientific materialism" underscoring the reliance of the new trend on science and its means for substantiation of materialism ("science" is, of course, limited to natural science, predominantly physics).

The "scientific materialists" trace their views to the philosophical tradition originating from Democritus and invoke La Mettrie, Hobbes and other pre-Marxist thinkers as their ideological predecessors; some of them profess atheism and make a firm stand against religion.

In order to get a better idea of the genesis and philosophical background of "scientific materialism" and localise it among the numerous trends and doctrines on the philosophical scene, we shall turn to the conventional classification of approaches to the mind-body problem. According to this classification adopted by many current writers on the subject (including "scientific materialists"), all solutions to the problem fall in two main categories: monistic and dualistic (some also add pluralistic). Monistic solutions include only those which reduce completely the mental to the physical (radical physicalism) or, vice versa, the physical to the mental (radical mentalism). Under the head of dualistic solutions come the conceptions which reject such reduction and regard the mental and the physical either as independent entities capable of interaction (after the fashion of Cartesian interactionism), or as entirely unrelated phenomena. The class of dualistic conceptions also includes "parallelist", "epiphenomenalist" and other theories. Among the monistic approaches, too, are distinguished several trends, e.g. "idealism" by which is understood Berkeleian reduction of the physical to the mental; the "two-aspect" theory treating the mental and the physical as two sides of a single entity and approximating to the idea of panpsychism; "neutral monism" including the conceptions of Hume, Mach, and James, and a variation of it represented by logical positivist Ayer.

Understandably, this classification (described in detail in Shaffer's entry in the *Encyclopedia* mentioned above) is absolutely unacceptable from the Marxist standpoint, as it confuses the ontological and epistemological principles and tends to eliminate the borderline between materialism and idealism; its inadequacy results, among other things, from a certain vagueness of terms "the mental" and "the physical" as will be shown later. However, this classification is very enlightening in the sense that it epitomises the assessment of various solutions of the traditional mind-body problem from the standpoint of analytical philosophy, the cradle of "scientific materialism" which owes it a number of categorial definitions and creeds. Besides, the cited classification provides, as it were, a clue to the genesis of "scientific materialism" representing to a great extent the naturalistic tradition in contemporary bourgeois philosophy and indicative of a profound crisis of neopositivism (its latest stage notable for the revival of ontology and "metaphysics" is often called post-positivism).[3]

"Scientific materialism" that took its first steps in the USA and Australia derives from two main and closely connected philosophical doctrines: logical positivism and the so-called analytical behaviourism,[4] particularly as represented by the conception of Gilbert Ryle.[5] Herbert Feigl (known to be a member of the

Vienna Circle), Wilfrid Sellars and other American representatives of "scientific materialism" came from logical positivism. Ryle's conception proved to be the starting point of evolution to "scientific materialism" for a number of Australian philosophers, first of all for J. J. Smart.[6] It is very characteristic of the new trend that its formation and development were strongly influenced by the achievements of psychology, physiology, and cybernetics, as well as by broad discussions of methodological problems connected with rapid scientific progress.

Rejecting the ontological "problematic", the logical positivists declared the classical mind-body problem non-existent and, as Carl Hempel put it, a "pseudo-problem".[7] "Are the so-called mental processes really physical processes or not? Are the so-called physical processes really spiritual or not? It seems doubtful whether we can find any theoretical content in such philosophical questions as discussed by monism, dualism, and pluralism".[8] Psychological statements must be reduced to physical statements and this is how we achieve the unity of science which, according to Carnap, can only be comprehended as a logical, and not an ontological problem. Hempel formulated this principle in the most uncompromising manner: "Psychology is an integral part of physics".[9] "All the branches of science are in principle of one and the same nature; they are branches of the unitary science, physics" (ibid., p. 382). According to Moritz Schlick, the "mental" and the "physical" are but two methods of describing and ordering experiential data; the so-called mind-body problem springs from a confusion of both these methods of describing an experience in one and the same sentence. Very close to Schlick's viewpoint is Ayer's conception of "neutral monism". Criticising the basic premise of Cartesian dualism, Ayer substantiates the thesis that "talking about minds and talking about bodies are different ways of classifying and interpreting our experience..."[10] In this way, in his opinion, we overcome the "Cartesian fallacy" and the insuperable difficulties of correlating the mental and the corporeal turn out to be imaginary ones.

As regards Ryle's conception, its main thrust is also against the Cartesian dualism; however, the author's obvious interest in ontological problems has led him to a behaviourist interpretation of "mental" events. The invalidity of the Cartesian dualism is traceable, in his opinion, to a categorial fallacy which results in the absurd combination of "mind" and "machine". We actually deal with nothing else than beliefs, knowledge, wishes, hopes, joys, etc. which do not need for their denotation a special category "mind" (Ryle points out that this term is practically not used in common language the analysis of which figures prominently in his conception and predetermines the author's inferences). For the same reason we do not need, according to Ryle, the category of "matter". "Theorists should drop both these words. 'Mind' and 'Matter' are echoes from the hustings of philosophy"[11] creating obstacles to the analysis of the "mental" and the "corporeal". The whole class of "mental" phenomena can well be described with the category of behaviour. It is therefore absurd to speak of physical motion as having mechanical and "mental" causes.[12] Expounding his viewpoint, Ryle expands the category of behaviour including into it not only actions, but also dispositions, i.e. possibilities, tendencies or inclinations to a certain action (ibid., p. 118).

Ryle's conception is fraught with a number of contradictions characteristic of the linguistic version of "monism" in its interpretation of the mind-body problem, particularly of the behaviourist reductionism based on the analysis of common language.* Significantly, tribute to behaviourism was paid not only by Carnap and Hempel, but also to a certain extent by the late Ludwig Wittgenstein (as was justly pointed out by Quinton and Armstrong).

Such was, in very general outline, the conceptual situation of the late 1940s-1950s in analytical philosophy that provided the background for the inception of "scientific materialism". Already in 1950 Feigl published an article (reprinted in 1953)[13] in which he made an attempt to revise the traditional logico-positivist assessments of the mind-body problem, stressing the standing nature of its ontological aspects, and hazarded a thesis of the identity of "mental" and "physical" phenomena. At about the same time Sellars made a resolute turn to the "metaphysical principles of science" and set himself against phenomenalism in defence of the conception of "scientific realism".[14]* The views of Feigl and Sellars of this period are indicative of attempts to give "ontic" substance to physicalism in contrast with its purely epistemological interpretation characteristic of logical positivism.

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* It is noteworthy that Ryle's late works show hardly a trace of his original "monistic" aspirations. He speaks of an indefinite conflict between reductionist and anti-reductionist intentions of our intellect rejecting, however, reductionism as a philosophical approach (on the grounds that common language cannot be reduced to a scientific one), comes out against the concept of One in any of its interpretations, from Platonic to physicalist, and lands up in commonplace pluralism.

However, it was only in the late 1950s that "scientific materialism" took shape as a separate philosophical doctrine. Its formation is creditable to three publications, Place's "Is Consciousness a Brain Process?" (1956), Feigl's "The 'Mental' and the 'Physical'" (1958) and Smart's "Sensations and Brain Processes" (1959) which aroused wide debates in Anglo-American and Australian philosophical literature. Let us consider the essence of these works.

According to Place,[17] it would be wrong to suppose that statements about phenomena of consciousness are statements about brain processes. For one thing, we can describe our sensations and mental images without knowing anything about our brain processes. Yet it does not mean that the statement "consciousness is a brain process" is a false one. It is a reasonable scientific hypothesis in the manner, for instance, of a statement that the lightning is movement of electrical charges. There is no logical relationship between "consciousness" and "brain process" which exists between "colour" and "red". Nevertheless, not only the statement "red is a colour", but also the statement "consciousness is a brain process" is meaningful just as the statement "his table is an old box", though the "table" and the "old box" are logically unrelated. Therefore it is erroneous to reason from the logical independence of two notions to the ontological independence of the objects they denote. It is this kind of error that not infrequently underlies objections to the statement that consciousness is a brain process.

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* Sellars' developed conception of "scientific realism" is presented in his later work.[15] The author only partially subscribes to "scientific materialism" interpreting the mind-body problem from the angle of the contradiction, discrepancy between the "actual" and "scientific" image of "man-in-the-universe". Since science, in Sellars' opinion is the measure of all things in description and explanation, the psychic properties of man (i.e. his actual description) can and must receive a neurophysiological interpretation which is an indispensable condition for a scientific description of man as a complex physical system. "Scientific realism", according to its author, is a transformation of Kantian critical idealism into realism which is both critical and scientific. A detailed analysis of "scientific realism" in the light of the disintegration of neopositivism and complex divergence of its components is given in Yulina's two articles mentioned earlier.[16]

Analysing logical conditions for identification of "consciousness" and "brain process", Place sets himself against Sherrington's dualistic interactionism tracing it to phenomenalism ("phenomenological delusion") and comes to the conclusion that it is possible and necessary to describe introspective data in terms of brain processes.

Feigl's article[18] gives a more thorough and detailed analysis of the relation between the "mental" and the "physical". Like in his other articles[19] the author specially underscores that the psychophysical problem is not a pseudo-problem and can be resolved by scientific and philosophical means. Setting out from Frege's theory, Feigl comes to the conclusion that the mental is identical with the physical in the sense that "mental" terms and certain neurophysiological terms have the same meaning since their referents are identical. In Feigl's opinion, progress in neurophysiology demonstrates increasing correlation between sensations and brain states and he contends that there are no insuperable logical obstacles to the proof that this correlation can be turned into actual identity.

Such identity is not logically necessary, it is empirical by nature like the identity of "Morning star" and "Evening star", and not the identity "$5 = 2 + 3$". Feigl puts forward a case against phenomenalism and behaviourism (though his criticism from the position of "scientific materialism" is bound to lack in consistency, as we shall show later) and develops his conception of the "mental" and its description by linguistic means.

Behaviourism maintains, first, that every psychic phenomenon is reducible to actual behaviour or disposition to behaviour and, second, that language is always intersubjective and cannot be personal in principle. Feigl rejects both these theses. In his opinion, when we speak about our moods, sensations, feelings, etc., we turn not to our behaviour, but to the condition and processes of our "direct" experience. These unmediated subjective experiences, called "raw feels" by Feigl, give us "direct" and "immediate" knowledge of our psychic states and are expressed in some very personal language. All empirical conceptions are based entirely on this language, since it constitutes the "deepest level of evidence".[20]

Taking a stand against phenomenalism, Feigl shows here an obvious lack of consistency inasmuch as he offers no criterion for distinguishing objective physical reality from subjective phenomenology. Evidently seeking to buttress up his argument, he indicates elsewhere that in his "personal language" the term "physical" refers to a set of molecules whose action produces a sense impression.*

According to Feigl, "raw feels" can only be communicated to other persons in a mediated form, i.e. after being translated from the personal language into the intersubjective (common) language. The "raw feels" described in common language have, as Feigl puts it, the status of "central states" which are identified by him with definite brain processes (wherefore Feigl's conception is often called "central state materialism" or "identity theory"). Feigl's conception is a variety of radical physicalism which purports to give a monistic picture of the world as he regards brain processes as physical ones, and the latter, as the only objective reality.

Feigl is not averse to "metaphysical" arguments found not only in the article under consideration, but also in other publications. Thus, he often invokes the principle of simplicity: "Does the identity theory simplify our conception of the world? I think it does."[21] Feigl says that he has nothing against his view being qualified as metaphysical though he would rather call it metascientific. It is an important statement which amounts to an admission that the empirical chastity of logical positivism has proved a fiction and that "scientific materialism" is a kind of "empirical metaphysics" (this tenet of the identity theory is a permanent target of the critical shafts of its opponents belonging to different schools of modern bourgeois philosophy). Such is, in general terms, the content of Feigl's work, one of the corner-stones of "scientific materialism".

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* Commenting on Feigl, exponents of "scientific materialism" contend that there is no reason to suspect him of phenomenalistic sympathies. However, the dualistic opponents of "scientific materialism" never fail to point out this discrepancy.

As regards Smart's article, it did not make, in my opinion, any real advance on Place and Feigl: the author himself pointed out that his article was intended as an elaboration on Place's propositions and as a complement to Feigl's work "The 'Mental' and the 'Physical' ".[22]

Smart subjects typical arguments against the principle of identity of the mental and the physical to a scrupulous analysis substantiating the thesis that a sensation is a brain process. Like Feigl, he resorts to "metaphysical" arguments ("Ockham's razor" and others) and castigates dualism contrasting it with his "materialist metaphysics" (ibid., p. 41). There is nothing in the world except physical events, and man is nothing more than a "physical mechanism". This thesis runs right through all Smart's numerous works and he devotes a whole chapter in his book *Philosophy and Scientific Realism* to its defence and substantiation.[23]

The three programme works discussed above have set off an avalanche of pro and con publications; "scientific materialism" rallied a host of active supporters and sympathisers whose views were given extensive coverage in the U.S., British and Australian periodicals. The identity theory has put forth buds of new versions and become a focus of lively debates and a target of critical attacks on the part of idealists, dualists and theologians. As C. V. Borst has pointed out, the mind-body identity theory "provides one very fruitful focus of interest for discussions of problems in the philosophy of mind".[24]

It is by no means accidental that "scientific materialism" became an influential trend within a comparatively short period and attracted the attention of philosophers of very diverse orientations. The popularity of the new school derives, first and foremost, from the nature of its problems which are closely associated with the basic question of philosophy and focus on the relationship between the spiritual and the material; what is more, the ontological bent of the "scientific materialists" appears to be an encouraging contrast with the rabid and often militant antiontologism of the logical positivists. The advantages of the new teaching stand out with particular clarity against the background of the general crisis of modern idealist philosophy and the devaluation of dualism which go side by side with the marked strengthening of materialist tendencies in Western countries.

This general trend is largely creditable to the latest social processes including the current scientific and technological revolution and the breakthroughs in natural sciences. Western philosophers seem to be fully aware of the enormous impact of this latter circumstance. For instance, David Rosenthal, the editor of one of the collections devoted to "scientific materialism" writes: "Philosophical interest in materialism has become especially pronounced in the last decade, in large measure stimulated by advances in such areas as neurophysiology, biophysics, and computer science."[25]

The above-indicated materialist tendencies represent a broad spectrum of views and approaches of varying conceptual maturity having different genetic links with contemporary philosophical schools in the West.

These tendencies range from a relatively consistent materialist stand of Marvin Farber[26] and a number of other representatives of so-called naturalism[27] to rather eclectic conceptions exemplified, for instance, by the views of Stuart Spicker. Rejecting Cartesian dualism, he arrived, as he puts it, at a definite form of spiritual materialism which is at best a contradictory doctrine but nevertheless radically different from coarse materialism and spiritualism.[28]

In this motley array "scientific materialism" ranks close to naturalism merging with it on a number of important issues. The "scientific materialists" focus their attention on the mental (psychic) as a function and property of the brain; they accentuate the ontological aspect of the mental treating it in terms of the classical mind-body problem and subjecting to a very thorough analysis the logical questions of the mind-brain relationship (as we shall see later, certain results of their investigations are of considerable scientific interest).

In view of the above it appears hardly justifiable to dispose of the identity theory as "one of the varieties of modern vulgar materialism".[29] To be sure, scientific materialism with its radical physicalism is illustrative of the main shortcomings of pre-Marxist mechanistic materialism, yet it is very different from classical vulgar materialism if only for the fact that the latter has never raised the logical problem of the relationship between the mind and the brain, whereas the former regards it as one of the main issues. Significantly, it is precisely the logical-linguistic analysis of the mind-body problem that has been steadily coming into the foreground over the past few years.

As regards the attempts to rate the representatives of "scientific materialism" with the idealists, they appear to be absolutely untenable. Feigl, for one, has gone far beyond the bounds of logical positivism. In my opinion, there is every reason to include "scientific materialism" under the general head of modern naturalism, rather a heterogeneous trend. This view of the philosophical affiliation of "natural materialism" as a whole and of its individual exponents seems to be shared by Narsky, Bogomolov and Yulina.[30]

The "scientific materialists" unequivocally rank themselves with the naturalists. For instance, Armstrong writes in his book *Belief, Truth and Knowledge* that he offers it as a contribution to the naturalistic explanation of man.[31]

In assessing "scientific materialism" as a philosophical trend, one must take due account of the fact that it draws on vast scientific material and represents a peculiar version of the natural scientists' theoretical reflection. At any rate, the identity theory is implicitly shared by many Western natural scientists who look to it for methodological orientation. According to Shaffer, "it is a hypothesis that many scientists take seriously and use to guide their research".[32]

2. Varieties of "Scientific Materialism"

The philosophical trend known as "scientific materialism" is comprised of a number of conceptions notable for considerable difference in the interpretation of notions "the mental" and "the physical", and also—which is particularly important—in the understanding of and argument for their identity. Hence the different forms of physicalism ranging from very rigid to extremely lax. The "scientific materialists" themselves, their sympathisers and opponents differentiate a large number of shades of materialism and identity theory, often exaggerating their differences and thereby obscuring the essence of the matter. For our purposes it will be sufficient to distinguish between two main varieties of the philosophical school in interest.

These varieties are usually called "eliminative materialism" and "reductionist materialism". The differences between them reflect the basic contradictions of the identity theory and the futility of attempts to overcome them.

One of such contradictions consists in the following. A statement affirming the identity of two objects implies "strict identity", i.e. the identity of all extensional properties of both objects, otherwise we shall have not an identity, but a correlation of two objects. Yet this requirement cannot be satisfied in respect of the "mental" and the "physical". Proceeding from this basic fact, the opponents of the identity theory usually adduce two arguments in support of their views: first, physical phenomena (brain processes in this particular case) are always localised in space, whereas mental phenomena have no such property; second, a definitive property of "mental" events consists in their unmediated character, immediate givenness to the subject (e.g. a sensation of pain) and, consequently, they are assentially private; by contrast, physical events are given to us in observation and are essentially public. If the mental is indeed identical with the physical, it must be, first, localised in space and, second, it must be public, that is, for instance, my sensation or my thought must be observable in the same sense as physical events.

The "scientific materialists" try to ward off these critical shafts by different methods: first, by substituting watered-down kinds of identity for the "rigid" one (Nagel, Quinton and others; Quinton also stresses the need for further elaboration of the so-called identity logic in order to deepen our understanding of the mind-brain identity—in his opinion, the present-day identity logic is full of contradictions and far from being perfect); second, by topically neutral description of mental phenomena (Smart) or by agreeing to localise "central states" (Shaffer); third, by arguing the relativity of differences between the "private" and the "public", the introspective and the observable, the subjective and the intersubjective (Smart, Armstrong, Feyerabend, Rorty and others).

It stands to reason that different authors combine and use the above methods in different ways. Thus a group of identity theorists takes a firm stand against the theory of immediate knowledge allegedly characteristic of "mental" events or, as Sellars put it, against "the Myth of the given". In Rorty's view, the acceptance of the "given" is tantamount to a break with "scientific realism" and a return to "the internal difficulties engendered in traditional empiricisms and rationalisms by the notion of a pre-linguistic item of awareness to which language must be adequate".[33]

Another group, no less influential, takes exception to the above views and rejects the "eliminative" theory contending that immediate knowledge simply cannot be eliminated in the analysis of the mind-body problem (Richard Bernstein, James Cornman, and others).

The first group advocates what we earlier called "eliminative materialism". The followers of this conception hold that "mental" terms should be eliminated as science (particularly neurophysiology) progresses and replaced by precise scientific terms, since "mental" terms in fact belong to common language. Since, according to Rorty, what we call a sensation is nothing else than a brain process, the term "sensation" loses its specific meaning and becomes redundant. Rorty draws an analogy between "sensations" and "demons": like the "demons" that were invoked in olden times to account for deseases and are replaced in our time by viruses, "sensations" will disappear from scientifically oriented language. "The materialist predicts that the neurological vocabulary will triumph."[34] Rorty calls his approach to the identity theory a "disappearance form".

Feyerabend maintains a similar position. Seeking to prove that "the knowledge we may possess about mental events must not be incorporated into the mental terms",[35] he adduces the following arguments. First, the illusion of immediate knowledge of our mental phenomena derives from the meagreness of its content; in order to become true scientific knowledge, it must be enriched through behavioural and neurophysiological investigations. Second, the above indicated illusion is also traceable to the influence of everyday colloquial language which conceals, masks the fact that our belief in "immediate givenness" is actually a result of a definite theoretical orientation of which we are hardly aware and which therefore escapes our critical analysis. If the given were a reality and the corner-stone of knowledge, that would mean the end of rational, objective knowledge and language and conversation would become comparable to a "cat-serenade". Every kind of knowledge, therefore, admits of mediation and our task consists in giving "mental" terms a genuine scientific content which is equivalent to their elimination in favour of a purely materialistic language.

The question of the existence of immediate knowledge is rather a complex one and its analysis calls for a much broader approach than that offered by Feyerabend. From the Marxist point of view his solutions are completely untenable in their basic postulate, i.e. flat rejection of the possibility of immediate knowledge in any form.

The conception advanced by Rorty and Feyerabend has been substantiated and further developed by Ulfe Jensen. He defines his approach to the psychophysical problem as "conceptual epiphenomenalism" which is, in his words, "a kind of Sellarsian theoretical identification".[36] His main conclusion is this: "Our mental predicates would be replaced by predicates synonymous with predicates defined within an adequate neurophysiological theory" (ibid., p. 275).

Smart who subscribes to the same version of the identity theory admits, though grudgingly, to his drifting towards the "disappearance form". This evolution is also characteristic of Feigl's views as is evidenced from his postscript to the article "The 'Mental' and the 'Physical' ".

As is known, in their time the "logical positivists" put forward a demand to reduce the language of psychology to the language of physics. Now the "eliminative materialists" are advancing a programme, just as impracticable, of reducing "mental" terms of common language to precise neurophysiological terms. Since they make the authenticity of materialism contingent on the fulfilment of this programme (and this is precisely the attitude of many "scientific materialists"), their alleged defence of the materialist teaching turns in practice into its discredit. It is not fortuitous that Karl Popper has aptly labelled this conception a "promissory materialism" underscoring its unsoundness.

The basic propositions and conclusions of "eliminative materialism" are by no means new. They have long since been advocated by positivist-oriented theorists, John Watson and all radical behaviourists, as well as by some mechanistically minded physiologists. In the Soviet Union way back in the 1920s A. G. Ivanov-Smolensky came out with a theory that the only way to overcome psychophysical parallelism was to substitute the physiological language for the psychological idiom. To show the feasibility of such a project, he painted this cheerful picture: "Suppose we set up a children's colony on a desert island and place its inmates brought to the island in their infancy in the charge of specially trained personnel strictly prohibited from using psychological terms and authorised to replace them by corresponding biological and physiological notions. For such children any 'psychological activity' would be non-existent and they would interpret their relationship to the environment as brain activity, as reactions of one or another part of their nervous system, or as this or that physiological process."[37] Such views having nothing in common with the dialectico-materialist approach to the psychophysiological problem appear to have deep roots and time and again crop up in our literature.*

It hardly needs proving that the idea of the complete elimination of the "psychological language" in favour of "physiological language" is utterly utopian. There is no denying that "eliminative materialism" is consistent. Moreover, this conception is frequently regarded as the only theoretically correct form of "scientific materialism". Yet the price of this consistence is too high—it runs into the absolutisation of physiological approach and virtual elimination of the problem itself.

It should be noted that the "eliminative materialists" rightly take exception to the "immediately given" as the foundation of any knowledge thereby delivering a telling blow on neopositivist phenomenalism. However, they understand consciousness in a very primitive way ignoring its reflexivity and, consequently, the specificity of the reflection and cognition of the phenomena of consciousness (reflexivity is inherent in any conscious act, which means that we always possess certain immediate knowledge about our conscious experience). They completely ignore such a fundamental property of consciousness as the unity of the Self and

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* Not long ago Shichko, for instance, contended that any recognition of the specificity of psychic processes and their distinction from physiological processes is idealism.[38] In his opinion, "the notion of the 'physiological' is broader than that of the 'psychic', the former being generic, and the latter, specific" (ibid., p. 11). This attitude reflects a deep-seated conviction that the psychic can be equated with the physiological and the subject-matter of psychological research, with that of physiology. Such is the stand, taken, for instance, by Koltsova.[39] I wholeheartedly subscribe to the criticism of this stand in the *Kommunist* editorial.[40]

Other modalities (each conscious act always carries a certain amount of knowledge both of the Self and of Other) and, which is the most important, dispense with the principle of reflection underlying creative activity of the self-conscious subject.

Let us turn now to "reductionist materialism" (often referred to as "noneliminative materialism"). Its adherents engage in sharp polemic with the "eliminative materialists" who reject the need for sensuous terms in order to correctly describe reality.[41] According to Cornman, there is good reason to think that we may correctly describe a man by saying that he possesses sensuous experience, and that no physical statements can provide a similar description. Together with Nagel he advocates the identity theory version known as "theoretical materialism". Its adherents contend that the identification of sensations with brain processes is only possible as a "theoretical reduction", i.e. the reduction of an object observed by conventional means to some theoretical object described by the corresponding scientific theory. For instance, water is identified with H_2O; gas temperature means nothing else than the kinetic energy of a definite number of molecules, etc. This approach, according to Nagel, preserves the idea of physicalism since "theoretical identity" meets its main criteria.

Very similar are the views of Anthony Quinton who contends that the identity theory does not deny the introspectivity of mental events and states, nor their difference from verbal or any other behaviour. It takes them in a causal relationship to such a behaviour. What it wants to prove is that every introspectively discriminated mental state is also a discriminated brain state.[42]

In contrast to the "disappearance form" this version of the identity theory is called a "translation view" which is strongly reminiscent of the theory of "translation" of the language of psychology into the language of physics as expounded by Carnap and other logical positivists. David Rosenthal had every reason to observe: "The translation view therefore implies materialism. But the opposite does not hold; materialism could be true and yet the translation view false. For it is in general possible that descriptions that have different meanings should nonetheless be about the same things."[43]

Some "scientific materialists" refuse to identify themselves with either version of the "identity theory" and occupy an intermediate position (May Brodbeck, Ernest Sosa, M. Deutscher, Donald Davidson and others) thereby testifying to the absence of a clear demarcation between the "disappearance form" and the "translation view". As regards Armstrong, the author of a fundamental monograph summing up the development of "scientific materialism" over a decade, his "uncompromising materialism" clearly gravitates towards the "disappearance form". According to Armstrong, it is quite correct to say that "the mind is the brain"; it is right in the same sense in which we say that "the gene is the DNA molecule".[44] Rating himself with the "pure materialists", he says: "A pure Materialist allows man nothing but physical, chemical and biological properties which, in all probability, he regards as reducible to physical properties only" (ibid., p. 37). For this reason, in his opinion, "causality in the mental sphere is no different from causality in the physical sphere" (ibid., p. 83).

Criticising Armstrong's stand, Nagel justly observes that the main theoretical difficulty arises when we find out that the conception intended to account for the phenomenon of consciousness calls in question its existence. This difficulty or, more precisely, theoretical discrepancy, remains unresolved in Armstrong's conception, hence the inadequacy of his analysis.

In recent years the crisis of the physicalist approach to the solution of philosophical problems has been deepening. It is also true of the radical physicalist methods of solving the mind-brain problem as attested by the ebbing "tide of reductionist euphoria" in Western philosophical literature. The quoted words have been taken from Nagel's article under pretentious title "What Is It Like to Be a Bat?" in which he laments over the failure of the physicalist programme of mind research. In his opinion, reductionist analysis has skirted the most crucial and specific features of conscious phenomena which remain obscure. "Most reductionist theories," he complains, "do not even try to explain it."[45] These features express the "subjective character of experience", and do not lend themselves to a physicalist interpretation. Nagel, nevertheless, does not desert physicalism expressing a hope that its approach may become useful "in the distant intellectual future" (ibid.).

The main task at present, in his opinion, consists in pursuing "a more objective understanding of the mental in its own right" and in developing "an objective phenomenology" (ibid., p. 449). Nagel ends his article in a pessimistic key showing a clear inclination towards the absolutisation of the "subjective character of experiences" (ibid.).

It is symptomatic that in the past few years natural scientists have also begun to lose faith in the "identity theory". A number of prominent neurophysiologists and cyberneticists have expressed a negative or sceptical attitude to this trend. Feigl's conception has been subjected to criticism by eminent neurophysiologist Arthuro Rosenblueth. Another prominent neurophysiologist Karl Pribram points out that though the identity theory is not entirely wrong, it is fraught with contradictions that stem from the need to use "an additional language" of psychological description. "The identity theorist thus ends up as a pluralist, and identity remains an unachieved goal."[46] Biocyberneticist Gerd Sommerhoff says in his monograph that despite "the popularity of the *identity thesis* ... none of these views has been able to escape fatal objections and contradictions".[47]

The increasing discontent of the adherents of "scientific materialism" and their sympathisers with the principles of radical physicalism reveals itself in different forms—from a gradual divergence from traditional physicalist conceptions and even a complete break with the identity theory (exemplified by the evolution of Nagel's views) to the emergence of new modifications of "scientific materialism" where radical physicalism is replaced by a kind of cyberneticism. Very indicative of such developments is the new trend known as "functional materialism". Theoretical constructs of its proponents deserve special attention as they are convincing testimony to the crisis of traditional physicalism. The "functional materialists" Hilary Putnam, Jerry Fodor, Arthur Danto and others call in question the theory of identity in Feigl's and Smart's interpretation; from their viewpoint psychic phenomena are equivalent not to physical processes in their conventional interpretation, but to definite functional states of a living system which cannot be reduced to its purely physical properties.

General dissatisfaction with the methodological premises of radical physicalism has led, for instance, Sellars to a conclusion that "the chemistry-physics paradigm is inadequate" for the reductionist explanations of psychic phenomena.[48] This kind of deviation from the principles of radical physicalism which does not affect the dissenters' general scientistic stand is characteristic of many adherents of the so-called postpositivist movement. Special interest in this connection attaches to the analysis of Smart's and Armstrong's physicalism undertaken in T. E. Wilkerson's book.[49] The author draws a distinction between "scientific physicalism" and "philosophical physicalism" pointing out that the "scientific materialists" always confuse these notions. In Wilkerson's opinion, "scientific physicalism" as a limited programme aiming at the natural scientific interpretation of a number of man's psychic properties deserves every support wherefore he hails the conceptions of Smart and Armstrong. As regards "philosophical physicalism", its radical reductionist pretentions are unfounded. Wilkerson justly points out that the physical principles by themselves are not sufficient to prove philosophical principles: "To suggest that the proof of the philosophical thesis must come from science is in effect to overlook the distinction between scientific and philosophical physicalism" (ibid., p. 68).

A substantive critical analysis of physicalism which is crucial to our conception of the ideal will be given in the next chapter. Directly related to this conception are also the views of the "functional materialists" representing, in my opinion, the most interesting and advanced version of "scientific materialism". This version deserves special attention as it oversteps in many respects the bounds of "scientific materialism"; its exponents cross swords with the adherents of physicalism and reductionism on the one hand, and with the representatives of idealistic and dualistic conceptions of consciousness, on the other, seeking to substantiate "nonreductionist materialism" and give a materialistic explanation of man's spiritual activity and cultural phenomena. Their views will be discussed at length later. At this stage, however, we shall confine ourselves to the criticism of "scientific materialism" as expressed in its basic physicalist form.

3. Critique of "Scientific Materialism" in Contemporary Western Philosophy

As has already been pointed out, "scientific materialism" found itself in the centre of lively polemics and became the object of critical interest on the part of the representatives of different trends of modern bourgeois philosophy. Opponents of "scientific materialism" can be divided into two main categories. The first category includes philosophers of the neopositivist tradition and those who represent in one way or another the "post-positivist" tendencies. Some thinkers of this group show affinity with the identity theory and criticise it rather from within than from without wavering between the principle of "identity" and the principle of the "correlation" of the mental and the physical. They usually focus their attention on logical contradictions of the identity theory.

For instance, Jaegwon Kim examines the identity theory from the angle of its monistic claims and comes to the conclusion that its basic arguments "from scientific simplicity" and "from ontological simplicity" lack cogency and strength and cannot be pursued consistently.[50]

The logical-semantic analysis of Feigl's conception carried out by Paul Meehl[51] reveals contradictions in the identity theory. Meehl's work holds considerable interest in that it highlights one of the corner-stones of the identity theory, namely, the question of the relationship of empirical and theoretical knowledge. The solution offered by the "scientific materialists" of all shades appears to be highly doubtful as they conjoin the mind-brain identity regarded by them as an empirical and contingent phenomenon with metascientific and "metaphysical" principles in a very superficial manner so that their "empirical metaphysics" turns out extremely eclectic.

Meehl has indeed put his finger on one of the weakest spots of "scientific materialism". It is not fortuitous that this eclecticism is the main target of the critical shafts levelled against the theory of identity both by the phenomenological empiricists who reject its apriori principles as unfounded, and by the spiritualists and theologians who expose its "metaphysics" and contend that the "scientific materialists" could just as well accept the cosmological argument for god's existence. This criticism brings out a really difficult question which becomes a stumbling block to many researchers of the psychophysiological problem. In my view, a breakthrough in its investigation can only be achieved on the basis of a thorough Marxist analysis of the relationship between the empirical and the theoretical in this particular field.

Very close to the identity theory are the views of Richard Brandt who has been interested in it for a long time. In his opinion, one can hardly expect to achieve a complete identification of an individual's perception of the blue sky and his brain processes; we have here correlation rather than identity.[52] In a later article written together with Kim he arrives at a principle of "methodological phenomenalism" (or "simultaneous isomorphism" of psychic and physical phenomena) which, however, is regarded by him as compatible with the identity theory. Brandt and Kim rightly point out that "logical connection between identity theory and materialism ... is by no means obvious"[53]: the identity relation is symmetrical, and this means that some physical events must be recognised to be mental. This, however, runs counter to the principle of materialism.

This remark aptly brings out the discrepancy and contradictoriness of "scientific materialism". Indeed, the identity theory seeks to objectify the mental by the physicalist method, yet it simultaneously preserves and uses basic characteristics of the mental (spiritual). This gives the opponents of the identity theory good cause to assert, not unreasonably, that the stand of its adherents differs but little from the doctrine of dualism and even "monistic idealism".

A strong case against "scientific materialism" has also been made out by Norman Malcolm who is rated with the analysts and holds views reminiscent of early Wittgenstein. Some of his arguments deserve mention. For instance, he notes a contradiction consisting in that the mental-physical identity is recognised to be empirical ("contingent") and at the same time "strict". If this identity is contingent, it must be proved or refuted by empirical means, which are non-existent; as regards strict identity between sensations and brain processes it cannot be proved in principle as sensation is devoid of the spatial characteristic.

Malcolm repeats Wittgenstein's argument that sensation and thought cannot be referred to the brain: "People see, hear, think—not brains."[54] "This would be like thinking that if my invitation to dinner is in my pocket, then my pocket has an invitation to dinner."[55] This sounds witty but not very convincing, since thought is a function of the brain, but not of the heart, body, right leg or all these put together. Malcolm rightly points out the inconsistencies inherent in the idea of logical identification, not to speak of ontological inferences from such identification. Analysing the statement "sensation is a brain process", he draws the following analogy: "Even if I believe that the President of France is the tallest Frenchman, it does not follow that ... the President of France ... is the tallest Frenchman."[56] As a result, he declares Smart's general position hopeless, and the identity theory, meaningless.[57] It should be noted, however, that Malcolm's stand is even more hopeless, as for him the fact that man has sensations or can think is in principle "conceptually independent of the investigation of brain processes" (ibid., p. 68). The argument from "logical (conceptual) independence" has a doubtful value. Light is also logically independent of a flow of photons—we may speak at length about light knowing nothing about photons. Malcolm's stand in fact boils down to the hypostatisation of existing sensuous relations fixed in the common language, which bars the way to the cognition of the essence of things. Here we must definitely give preference to "scientific materialism" seeking to comprehend psychic phenomena as function of the brain.

In the second category of the critics of "scientific materialism" come dualist thinkers of various (mainly Cartesian) shades and the objective idealists (including the theologians). Their attacks against "scientific materialism" are distinguished by particular vigour as attended to by Erik Polten's bulky monograph which is specially devoted to the criticism of the identity theory.[58] The preface to this book has been written by John Eccles, a prominent neurophysiologist known to be an adherent of dualistic interactionism and an old and active opponent of materialism. Eccles gives full support to Polten's criticism considering his book to be a strong challenge to "the last tenable philosophical position of the materialist monists" (ibid., p. XIV).

Polten clearly defines his credo declaring that there exist two worlds—the "world of mental entities as things in themselves" and the "world of material entities as things in themselves" which interact with one another: between them are mental phenomena of external sensations (ibid., pp. 20, 273). Attacking "scientific materialism" from these patently dualistic interactionist positions, Polten nevertheless rightly points out a number of really vulnerable propositions of this philosophical doctrine, such as the definitions of the mental and the physical, the eclectic combination of empirical and theoretical premises in the attempts to substantiate the identity theory, and others. Polten argues the tenability of materialism by invoking parapsychological phenomena and incorporeal exisence of the soul since "only interactionism of dualistic theories can explain independent existence of the soul from the body, either before birth or after death" (ibid., p. 260). He seeks to identify, without any good reason, Feigl's definition of the physical with the Marxist-Leninist definition of matter. The true worth of his arguments is clearly revealed, for instance, in this statement: "Of course, even consciousness is material for Marxists, as for Feigl" (ibid., p. 113).

Like Eccles, he tries to prop up his theory with Popper's conception of "three worlds". It is not accidental, as Popper has repeatedly declared in favour of the interactionist version of mind-body dualism arguing from the inability of physicalism to explain the language phenomenon. This argument has added a peculiar dimension to the "three worlds" conception and is accountable for its extensive use by theologically oriented philosophers from the camp of the objective idealists and dualists. Popper's conception has been subjected to an interesting critical analysis by Herbert Keuth who voiced an opinion, essentially correct, that Popper's dualistic slant is traceable to his radical antipsychologism.[59]

The doctrine of "scientific materialism" is also fiercely attacked by Stanley Jaki, P. A. Gerbst and other thinkers whose views show a close affinity with the conception of dualistic interactionism.

Special mention should be made of such uncompromising critics of "scientific materialism" as H. H. Price, John Beloff, J. R. Smythies, Hartwig Kuhlenbeck and others who call themselves adherents of "the new theory of non-Cartesian dualism".[60] According to Smythies, the distinguishing feature of this "new" type of dualism is that, besides "physical space", it recognises the existence of special "mental space", the location, so to speak, of mental phenomena. Since "memories, desires and images can exist in the absence of a physical brain",[61] Price postulates the existence of "Another World" and "post mortem experience" and contends that "we may conceive of post-mortem embodiment in a quasi-physical manner, as the Occultists and Spiritualists do" (ibid., p. 31).

This statement hardly needs any comment. This is typical spiritualism. One of its advocates, Beloff, who places a far lesser reliance on the fiction of "mental space" and whose views approximate to the Cartesian form of interactionism comes out with a whole set of arguments against the doctrine of "scientific materialism". His main thesis is the following: instead of castigating phenomenal and linguistic dualism as something completely untenable, "we should rather accept it as a reflection of a still more fundamental duality in nature".[62]

As regards the theologians, their criticism of the attitude of the "scientific materialists" to the psychophysical problem boils down to the statement that "the naturalistic theory is incompatible with Christian belief".[63] In A. C. Ewing's book a large section specially devoted to the criticism of the identity theory is mainly concerned with the psychophysical problem. His principal thesis consists in that identity is possible only in the sphere of mental phenomena and only for "incorporeal spirit"[64]; in his opinion, it is impossible to vindicate the view that mental qualities belong to a body (ibid., p. 85). What particularly strikes one is the extreme theoretical poverty of the theologians' analysis of the psychophysical problem and their criticism of the materialist doctrine.

This is equally true of the criticism of "scientific materialism" from the extreme relativist position merging, in fact, with agnosticism. Reasoning from such theoretical premises, Richard Schlagel declares the mind-body problem insoluble; in his opinion, the impasse stems from the basic inadequacy of our consciousness: "The more we strive to approach the truth, the more it recedes."[65]

Our brief survey of current philosophical trends adhering to or crossing swords with "scientific materialism" clearly shows that contemporary Western philosophy is characterised by a sharp struggle between materialism and idealism.[66] However, "scientific materialism", as has been already pointed out, does not go beyond the bounds of pre-Marxist mechanistic materialism. It may well be called, by analogy, "physical materialism".

The fundamental weakness of "scientific materialism" consists in that it tends to replace the notion of matter by the notion of the physical used at that rather loosely, as we shall try to show later. Hence its interpretation of materialism as physicalism. "By 'materialism'," writes Smart, "I mean the theory that there is nothing in the world over and above those entities which are postulated by physics (or, of course, those entities which will be postulated by future and more adequate physical theories)."[67]

This definition of materialism is completely untenable, it attests to the narrowness and primitiveness of the physicalist-scientistic world-view. It ignores the fact that there exist objects in the world that do not fall under the head of physical phenomena and cannot be reduced to them, for instance, economic relations, social revolution, class struggle. For Feigl, Armstrong, Smart and other writers holding similar views such phenomena are practically non-existent. They concede the existence of an individual whose pale shadow they reproduce in their conceptions, but they do not know human society. This object has no room in the conceptual schemes of "scientific materialism". The entire vast field of humanities remains a sealed book to it. Such are the inevitable consequences of radical physicalism.

To be sure, the "scientific materialists" are not unfamiliar with the notion of matter, but they either identify it with the notion of substance or use it in the sense of the physical which is rather ambiguous. Here is a typical example of their reasoning: physicalism is a better name for modern materialism, "since 'materialism' suggests that everything is made up of matter and contemporary physics has shown that there is a lot more to the world than matter; indeed, the line between matter and force is anything but sharp".[68] Feigl's view of matter is not much different: "Physics deals with happenings in space-time, and that associated with... aspects of mass, charge and motion which leave at least some characteristics of old-fashioned matter unaltered".[69]

Such statements clearly show that Lenin's critical analysis of the pre-Marxist, metaphysical concept of matter in his book *Materialism and Empirio-Criticism* is fully applicable to the views of the "scientific materialists", no less than the results of his investigation into the causes of the crisis in contemporary physics.

Another basic shortcoming of "scientific materialism" is its lack of dialectics. It is materialism without dialectics. Hence its main theoretical difficulties, wavering between identity and difference, the individual and the general, the subjective and the objective, the contingent and the necessary, the empirical and the theoretical. It is only the organic unity of materialism and dialectics attained in Marxism that can ensure materialism (and dialectics) against inconsistencies. The "scientific materialists" (and this wa noted even by Polten) ignore dialectical materialism and Marxist investigations into the problem of consciousness.

As has been shown in these investigations, the category of the ideal is by no means an alien element in the system of materialist monism. It accounts for the specificity of spiritual phenomena, reveals their place and role in the life of an individual and society as a whole and makes it possible to overstep the bounds of purely naturalistic, scientistic interpretation of the psychic phenomena thereby expanding enormously the horizon of comprehensive inquiry into the nature of human spirit.

Completing this very general survey of "scientific materialism", we ought to underscore that materialism cannot be purely "scientific" either in the sense that it rests only on science and uses only scientific instruments, or in the sense that it serves only science or identifies itself with it. In this respect the "scientific materialists" demonstrate extreme scienticism with its one-sided "daltonic" world-view—and safely land up in mysticism providing yet another proof that extremes meet. Genuinely scientific materialism which is nothing else than Marxist philosophy is based on man's entire socio-historical practice and all forms of spiritual activity, including politics, art and ethics; its object is the world as a whole in all its diversity. In contrast with "physical", naturalistic materialism, Marxist philosophy, being a cultural phenomenon itself, explains among other things the nature of social life and offers a comprehensive world-view and a methodological basis for investigation of all forms of man's cultural activity and its products.

Marxist philosophical materialism has its own categorial structure closely connected with general and specific scientific categorial structures, but not reducible to them. Against the background of Marxist philosophy "scientific materialism" is a very narrow, limited and inconsistent doctrine.

It would not be correct, however, to disregard the merits of "scientific materialism". Unlike logical positivism, it puts forward ontological problems and seeks to offer materialistic solutions. The "scientific materialists" take a firm stand against idealistic and dualistic interpretations of psychic phenomena. Their attempts to substantiate the thesis of the mental as a property of the brain open to scientific study like all other natural phenomena, interesting investigations into logical-epistemological aspects of the mind-brain problem, reliance on modern science and the atheistic orientation deserve full support of Marxist philosophers and should be used by them in contending against reactionary idealistic and dualistic trends, spiritualism and clerical obscurantism.

NOTES TO CHAPTER 4

[1] J. Shaffer, "Mind-Body", in: *The Encyclopedia of Philosophy*, Vol. 5, Collier-MacMillan Ltd., London, 1967, p. 345.

[2] J. O'Connor, "Introduction", in: *Modern Materialism: Readings on Mind-Body Identity*, Harcourt, Brace & World, Inc., New York, 1969, p. 5.

[3] N. S. Yulina, "Postpositivism and 'New Metaphysics' ", *Voprosy filosofii*, 1974, No. 1.

[4] D. M. Armstrong, *A Materialist Theory of the Mind*, Humanities Press, New York, 1968, p. 54.

[5] G. Ryle, *The Concept of Mind*, Penguin Books, New York, 1949.

[6] Noting this fact, C. F. Presley points out that the precursor of "scientific materialism" in Australia was John Anderson who was the first to put the mind-body problem in the limelight in his book published in 1934 and revised in 1962 (J. Anderson, *Study in Empirical Philosophy*, Sydney, 1962). It is noteworthy, that the Australian representatives of "scientific materialism" subjected Ryle's conception to strong criticism stressing the need for a consistently ontological approach to the problem in question.

[7] C. Hempel, "The Logical Analysis of Psychology", in: *Readings in Philosophical Analysis*, Appleton-Century-Crofts, Inc., New York, 1949, p. 380.

[8] R. Carnap, "Logical Foundations of the Unity of Science", in *op. cit.*, p. 413.

[9] C. Hempel, *op. cit.*, p. 378.

[10] A. J. Ayer, "A Philosophers' Symposium", in: *The Physical Basis of Mind*, Basil Blackwell, Oxford, 1957, p. 74.

[11] C. Ryle, "A Philosophers' Symposium", in: *op. cit.*, p. 79.

[12] See G. Ryle, *The Concept of Mind*, p. 22.

[13] H. Feigl, "The Mind-Body Problem in the Development of Logical Empiricism", in: *Readings in the Philosophy of Science*, New York, 1953.

[14] W. Sellars, "Realism and the New Way of Words", in: *Readings in Philosophical Analysis*, p. 424.

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Empirio-Scientistic Philosophy: John Smart and Wilfrid Sellars about 'Scientific Image of the World' ", *Filosofskie nauki*, 1978, No. 6.

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[18] H. Feigl, "The 'Mental' and the 'Physical' ", in: *Minnesota Studies in the Philosophy of Science*, Vol. II, University of Minnesota Press, Minneapolis, 1958.

[19] Idem, "Mind-Body, Not a Pseudoproblem", in: *Dimensions of Mind*, New York University Press, New York, 1960.

[20] Idem, "The 'Mental and the 'Physical' ", p. 392.

[21] Idem, "Mind-Body, Not a Pseudoproblem", p. 33.

[22] J. J. C. Smart, *Sensations and Brain Processes*, p. 33.

[23] Idem, *Philosophy and Scientific Realism*, Ch. 6, The Humanities Press, New York, 1963.

[24] C. V. Borst, The Editor's Introduction to *The Mind-Brain Identity Theory*, St. Martin's Press, New York, 1970, p. 29.

[25] D. M. Rosenthal, Introduction to *Materialism and the Mind-Body Problem*, Prentice-Hall, Englewood Cliffs (N.J.), 1971, p. 5.

[26] M. Farber, "Subjectivism and the Problem of the Objective World", *Filosofskie nauki*, 1976, No. 6.

[27] Naturalism as a peculiar philosophical trend has been investigated by A. M. Karimsky in his interesting monograph *Philosophy of American Naturalism*, Moscow, 1972 (in Russian).

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[29] A. M. Karimsky, *Philosophy of American Naturalism*, p. 72.

[30] I. S. Narsky, *Materialist Theory of Spirit*, Moscow, p. 43; A. S. Bogomolov, *English Bourgeois Philosophy of the 20th Century*, Mysl, Moscow, pp. 299-300; N. S. Yulina, *Post-Positivism and "New Metaphysics"*, Moscow, p. 145 (all in Russian).

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[32] J. Shaffer, "Mind-Body", in: *The Encyclopedia of Philosophy*, Vol. Vol. 5, Collier-Mcmillan Ltd., London, 1967, p. 339.

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[34] Ibid, p. 230.

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Chapter 5.

Untenability of Physicalist Approach to the Mind-Brain Problem

1. Physicalist Paradigm and Its Reductionist Programme. Physical Reality and Objective Reality

A substantive critical analysis of "scientific materialism" and related conceptions calls for a close examination of the "metaphysical" premises which underlie, explicitly or implicitly, the constructs of their exponents. Such an examination is the more important as these premises reflect, it may be recalled, an obvious tendency to rehabilitate the "metaphysical" principles of science. As distinct from the logical positivists who resolutely rejected these principles (though proceeded from them implicitly), the modern representatives of the so-called post-positivist movement declare them, often with enthusiasm, to be of paramount importance. This radical turn was unequivocally confirmed by J. Watkins, president of the British society of the philosophy of science in one of his speeches: "The counter-revolution against the logical empiricist philosophy of science seems to have triumphed."[1]

Leaving aside the analysis of what he called the "metaphysical ideas" or "metaphysical principles of science", I shall only note here that these notions are rather ambiguous as they often confound ontological statements in the classic philosophical sense with metascientific principles (we shall later see the far-reaching results of such a confusion). What I do want to underscore is that one of the principal "metaphysical" ideas implicitly determining the conceptual foundation and the programme of logical positivism continues exercising definitive influence on "scientific materialism" and other closely related post-positivist conceptions, but this time it is openly recognised to be "metaphysical" and is substantiated as such.

Its essence, according to Carnap, consists in that all laws of nature, including those governing the living organism, the human body and human society derive from physical laws whereby we account for nonorganic processes.[2] This proposition which we may well call the paradigm of physicalism is the common starting point of both logical positivism and "scientific materialism". Its main content and methodological functions remain intact irrespective of whether it is recognised as "metaphysical" or not. It sets out a definite programme of investigation which consists, according to "scientific materialist" Armstrong, in giving "a complete account of man in purely physico-chemical terms".[3] This programme is adopted in principle by both the radical and the moderate physicalists.

The paradigm of physicalism is essentially a kind of world outlook and methodological model representing the world as nothing else than a totality of physical processes (ontological aspect) and orienting investigators on reducing all phenomena to the physical substratum as the only true scientific basis (epistemological aspect). This is an obvious absolutisation of physical knowledge, a typical scientistic illusion of a possibility to unify scientific knowledge on the basis of physics.

Hence, the paradigm of physicalism includes as its integral part the principle of reductionism underlying its methodological programme and viewed as the only method of unifying scientific knowledge and creating a scientific picture of man. At this point the programmes of the logical positivists and the "scientific materialists" merge into one.

The reducibility of one theory to another is understood by the "scientific materialists" as the essential uniformity of those classes of objective phenomena which are described by such theories. This uniformity derives from their common physical nature wherefore the category of the physical is central to the constructs of "scientific materialism". Before proceeding to its thorough analysis, we must take a closer look at the paradigm of physicalism and its methodological effects.

Over the past decade the paradigm of physicalism and its derivative reductionist doctrine has been subjected to a growing criticism on the part of numerous schools of Western philosophy, including those disagreeing with one another. As might be expected, the strongest objections against physicalist reductionism have been raised by the philosophers of the so-called humanistic orientation (existentialists, hermeneuticists, theological anthropologists, and others). However, severe criticism of the reductionist doctrine was also voiced by the adherents of scienticism and theorists of contiguous trends including the philosophising natural scientists.

The main target of all critical shafts levelled against the doctrine of reductionism has always been the question of the reducibility of the "mental" to the "physical" considered to be the weakest spot of the doctrine. Thus Popper has emphasised that such reduction is a purely linguistic operation which is at variance with facts. Reality, in his view, is pluralistic wherefore the theory of knowledge must pivot on the principle of pluralism. Reasoning from this postulate, he attacks any monistic philosophical conception as incompatible with scientific principles.

It should be noted that the unsoundness of physicalist reductionism is not infrequently regarded by modern Western philosophers as unsoundness of materialism. This is characteristic not only of Popper, but also of those philosophers who, like Russell, lay special emphasis on the epistemological aspect of the problem.

There is no doubt that the reductionist programme implemented within reasonable limits may be highly beneficial to the advance of science; it has demonstrated its possibilities in studying interrelations between chemistry and physics and is credited with achievements on the borderlines of physics, chemistry and biology. Physicalist reductionism hypostatises these achievements elevating particulars to the universal.

Much more significant, however, is the fact that the relations between the phenomena of consciousness and their brain neurodynamic equivalents are essentially different from those relations which exist between physical and chemical or between physical, chemical and biological processes. The relations between the physical and the biological or the chemical and the biological in the form which they assume in modern scientific investigations (biophysical, biochemical, neurophysiological and others) are relations between hierarchical organisational levels of one and the same material object. By contrast, the relation between a mental phenomenon and a neurodynamic system of the brain conditioning this phenomenon is a relation between a material object and its property which, at that, cannot be adequately described in the language of natural science. It is a relation between a dynamic structure and its function, the latter being exercised not within this structure and not for it, but only within an integral self-organising system incorporating the given dynamic structure as its component. This basic difference invalidates the classic reductionist principles making them completely incongruous in the new situation. As regards the notorious identity theory deriving from the paradigm of physicalism, it is nothing but a fake designed to skirt theoretical difficulties in accounting for the specificity of mental phenomena vis-à-vis brain processes.

In contrast to the relationship between the chemical and physiological processes which permits reduction, i.e. making the complex simpler, the relationship between the brain neurodynamic system and the corresponding mental phenomena is irreducible in principle, as its members do not and cannot have a common criterion of complexity. Indeed, it would be utterly absurd to affirm that the subjective image I may be having at the moment in my mind is more complex than its brain neurodynamic equivalent.

The problem of the relationship between the notions of the physical and physiological (biological) is not a simple one. It involves overcoming major difficulties in establishing links between animate and inanimate matter, revealing the specificity of life based on physico-chemical processes.

It is evident that the physical and the physiological have a number of common features; moreover, physiological phenomena, like physical ones, have a spatial characteristic which cannot be ascribed (in the same sense) to the so-called mental phenomena. Yet there is no reason for identifying the physiological and the physical when considering the psychophysiological problem. The physiological (brain processes here) features functional activeness, purposiveness and ability for self-organisation which cannot be adequately described in the language of physics. It shows that the reduction in the full sense of the word of physiology to physics is not possible.

True, the "scientific materialists" express a hope that the progress of physics will lead to the development of adequate means of description and explanation of life processes. This assertion however, can hardly be taken for an argument as it is based on the assumption that physics will eventually absorb all branches of science concerned with life (including those which will evolve in the future) and reduce them to a status of its departments. The possibility of such boundless expansion of physics and strictly linear growth of scientific knowledge confined exclusively to physical concepts appears extremely unlikely to be reckoned with seriously.

As we see, the paradigm of physicalism leads to an oversimplified conception of the progress of scientific knowledge in general and natural science in particular, attesting simultaneously to a very lopsided interpretation of the category "physical". Let us now take a closer look at this category.

The notion of the physical occupies an important place in the categorial structure of modern natural science. However, the "scientific materialists" and the scientistically minded Western philosophers in general construe this broad notion very differently.

The physical is usually understood as a physical event characterised by spatial location, public observability and nonintentionality. Some exponents of "scientific materialism" and their adherents in discussing the mind-body problem avoid defining the "physical", "physical reality" limiting themselves to a description of "physical properties". This is, for instance, the attitude of Brandt and Kim: "We know of no adequate general definition of 'physical event' relevant to the mind-body problem. . ."[4]

Other proponents of this trend maintain a different attitude and seek to define the category of the physical in clear terms. This applies, first and foremost, to Feigl who distinguishes two meanings of the term "physical", the broader and the narrower ones, called by him respectively "physical$_1$" and "physical$_2$". He writes: " 'Physical$_1$' may be defined as the sort of objects or processes which can be described (and possibly explained or predicted) in the concepts of a language with an intersubjective observation basis."[5] This language, according to Feigl, is "characterized by its spatio-temporal-causal structure" (ibid.).

By "physical$_2$" Feigl means "inorganic processes" and, consequently, "the type of concepts and laws which suffice in principle for the explanation and prediction of inorganic processes" (ibid., p. 377).

Feigl holds that in the solution of the psychophysiological problem the mental ("raw feels") should be equated with "physical$_2$". Subjecting Feigl's conception to a critical analysis, Meehl and Sellars contend that the so-called raw feels can at best be identified only with "physical$_1$".[6] However, even if we accept this watered-down version of the identity theory, the notion of the physical used in the conceptions of the "scientific materialists" will remain very vague as they always speak of the empirical identity of the mental and the physical which means that the notion of the physical (as well as the notion of the mental) cannot be defined in a general theoretical form.

As has already been pointed out in the previous chapter, the arguments of the "scientific materialists" in support of the identity theory are notable for rather a loose, if not eclectic, combination of empirical and theoretical premises, as well as scientific, metascientific and "metaphysical" propositions. Underscoring the empirical status of the mental-physical identity, the "scientific materialists" nevertheless widely resort to metascientific and "metaphysical" means (the principle of simplicity, the principle of economy, etc.) for the substantiation of the identity theory. As a result—and this is particularly conspicuous in Feigl, Smart, Feyerabend and Rorty—identity takes the form of some "metaphysical" premise. This, in turn, gives a metaphysical ring to the basic notions of the identity theory, the mental and the physical. Paradoxical as it may be, the concept of the physical becomes metaphysical.

It is not surprising, therefore, that the "scientific materialists" now and again elevate the concept of the physical to a philosophical rank. More accurately, they use the term "physical" now in a philosophical, now in metascientific, now in a special scientific sense, but most frequently in all these senses simultaneously.

When used in the philosophical sense, the term "physical" comes close to the concept of matter as understood in pre-Marxist materialism (the world is a physical reality, there is nothing in the world besides physical objects and processes). This transformation of a scientific notion, broad as it may be, into a philosophical one is not only very characteristic of the scientistic way of thinking, but also highly illustrative of the unsolvable logical tangle it inevitably leads to. The scientistic world-view can only preserve the semblance of logical consistency within the narrow confines of its classic positivist version. As soon as it lets in metaphysical principles and starts using them, it destroys its own premises, since such principles cannot be deduced from science alone; they derive from human culture at large, from man's historical practice, and come within the domain of philosophy as a special branch of knowledge. Hence, it is wrong to think that "science is the measure of all things" (W. Sellars), the more so as by science is understood only its natural branches.

Attempts to impart a philosophical meaning to the category of the physical as exemplified by Feigl's concept of "physical$_1$" are an obvious upshot of the paradigm of physicalism, this "metaphysical" credo of the "scientific materialists". The concept "physical$_1$" acquires a philosophical meaning in so far as it is defined through the agency of philosophical categories of space, time and cause. This definition is not specific for a multitude of objects which fall within the province of physics proper. It stands to reason that every physical object (i.e. object of physical investigation) meets the requirement of the "spatio-temporal-causal" description, explanation and prediction. Yet the same applies to chemical, biological and social objects.

Such a broad definition of the category of the physical in fact breaks with the meaning of the physical based on real content of the physical science and on unbiased views of the prospects of its development. It absolutises the physical either by postulating a single all-embracing "physical substance" or, in the case of the epistemological accent, by identifying physics with science in general. From the Marxist viewpoint both these versions of the physical, in fact closely interwoven in the philosophical constructs of the "scientific materialists", look extremely dated.

Objective reality is by far larger than physical reality. It is rather native to present it as a kind of a one-dimensional structure consisting of only interrelated physical components. From the scientific viewpoint, objective reality is multidimensional and what is known as the "physical" constitutes but one of its aspects. The category of the physical, broad as it is, must be considered in indissoluble unity with real physical knowledge. Its real content can only be disclosed in terms of physics as a particular branch of science. This category expresses in a general form the specificity of methods, results, hypotheses and problems of physical investigations thereby restricting the class of material objects that fall within its scope.

To be sure, the task of giving a satisfactory definition of the "physical" involves considerable difficulties due to a widespread ramification and increasing differentiation of physical knowledge, extensive problem fields, rapid theoretical sophistication and absence of due orderliness in the hierarchy of theoretical subsystems which have already been elaborated and confirmed in the experimental field.

The category of the physical remains "open" (which is, for that matter, the case with any other scientific category) providing for a possibility of and a need for further development of physics and essential changes in its theoretical basis. Yet it is not "open" to such an extent as to eventually encompass all objects of reality and all principles and methods of scientific explanation. Such assumptions representing the credo of radical physicalism are not supported either by the history of science, or by sound theoretical predictions of its further development. In spite of the constant expansion of the range of phenomena included under the category of the physical, one should take due account of the reasonable limit to its scope; this limit is always determined by concrete historical conditions.

As distinct from the purely epistemological or naive ontological approach, the analysis of the category of the physical from the position of dialectical materialism presupposes differentiation and correlation of its epistemological and ontological aspects. The physical denotes physical reality which is defined as "an aspect of the objective world studied by physics".[7]

The concept of physical reality, extremely broad and applicable in different fields of natural science (which attests to the leading role of physics in the entire structure of our knowledge) is closely connected with metascientific and philosophical categories, reflecting this connection in its content. Indeed, the concept of physical reality cannot be interpreted without reference to a number of philosophical categories (reality, matter, and others), which does not mean, however, that this concept should be elevated to a philosophical level. This is also true of any concept of scientific disciplines with a developed theoretical basis (biology, chemistry, mathematics, cybernetics, etc.) which never attains the philosophical status however broad it may become. The concept of physical reality by its origin and main content is determined by nothing else than the development of physics, its leading theories. In this respect it is different from typical general scientific concepts, such as system, structure, function, information, etc. which have evolved and are developing on the basis of a broad interdisciplinary synthesis and for this very reason exercise a methodological influence on the progress of science in general.

The "scientific materialists" are notable for crude ontologisation of "physical reality" through its identification with objective reality in general. By contrast, a number of other representatives of scienticism in modern Western philosophy exhibit extreme epistemologism in the interpretation of this concept and not infrequently slip back into the rut of the neopositivist tradition.

It is inadmissible to identify the concept of physical reality with objective reality and elevate it to the rank of a philosophical concept. This trick accomplished by the "scientific materialists" entails extremely negative methodological consequences. For one thing, the undue extension of the method appropriate to physical research hampers the development of effective techniques for investigation of the so-called self-organising systems (which include biological and social objects).

The excessive universalisation of typically physical methods of description and explanation of natural phenomena manifests itself in different forms, ranging from direct extension of physical notions and methods to the sphere of self-organising systems (such extension goes hand in hand with the identification of the programme of radical physicalism with the tasks of scientific investigation in general) to a less conspicuous tendency to treat specific methodological and theoretical problems from the perspective of the physicalist paradigm. Attempts to use physical concepts and methods for explanation of consciousness, thinking and other mental phenomena are invalid from the methodological viewpoint and can hardly be expected to yield any appreciable results; we have shown it elsewhere on the example of the so-called thermodynamic theory of thinking.[8]

To avoid any misunderstanding, it ought to be plainly stated that we are far from calling in question the importance of empirical correlations between a change of certain physical va-

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riables of the brain (temperature, electromagnetic phenomena, and others) and a corresponding change of mental states. It is our conviction, however, that the true significance of such correlations can only be revealed at the theoretical level. In order to attain this level, we must resolutely overstep the bounds of the methodological principles set by the paradigm of physicalism.

2. Methodological Impasse of the Paradigm of Physicalism

The paradigm of physicalism represents a simplified model of scientific explanation; the attitude of the "scientific materialists" to the outside world provides convincing testimony to the truth of this conclusion. Indeed, despite the fact that they interpret the term "physical" in the philosophical and metascientific sense, the use of this category in their conceptions is linked in one way or another with special notions and methods of physics which perform the function of criteria for distinguishing between the scientific and the nonscientific, the real and the nonreal. The result is that if a certain phenomenon described in terms of common language does not lend itself to description in physical terms it is denied real existence. In like manner, if a certain relation between phenomena cannot be interpreted as a physical dependence, the description of this relationship is denied the status of a scientific description and should be eliminated from the multiplicity of relations recognised to be existing in reality. Thus the paradigm of physicalism cuts off as manifestly unscientific and therefore inadequate all explanations which fail to conform to the Procrustean bed of physical causality.

Such are the results of the methodological (and ontological) principles of "scientific materialism" if they are pursued consistently. Proceeding from these principles, the "scientific materialists" should either class mental phenomena as physical (and, consequently, describe them adequately in physical terms), or exclude them like demons, witches, goblins and the like from the world of real things. It is precisely what "eliminative materialism" demands.

This rigid dilemma predetermines the "scientific materialists'" attitude to the psychophysiological problem and underlies all their arguments. They hold that the mental should be reduced to the physical by all means, otherwise materialism will give in to objective idealism or dualistic interactionism.

The falsity of the above indicated dilemma is obvious and hardly needs a more detailed analysis. The paradigm of physicalism shuts the door upon further investigations of the mind-brain problem and confines them within the categorial structure of physical knowledge, thereby nipping in the bud heuristically valuable ideas and approaches that might germinate outside the domain of the physicalist language.

The paradigm of physicalism of which the theorists are sometimes unaware still keeps such a firm grip on the scientists' minds that not infrequently even the critics of "scientific materialism" cannot break out of the conceptual vicious circle drawn by radical physicalism and reason implicitly from the physical explanation of reality. As a result, the main thrust of their arguments is against the physical nature of mental phenomena, wherefore they seek to prove, for instance, that the brain has no objects, parts, elements and their properties that are given us in consciousness. Such arguments, of course, reveal certain theoretical inconsistencies of the identity theory, but fail to create any prerequisites for the effective investigation of the psychophysiological problem.

The critics of radical physicalism usually overlook its most important theoretical shortcoming, namely, its inability to justify the physicalist language on the basis of its own premises. Indeed, this language regarded by the "scientific materialists" as a model of true scientific language must meet the requirements of the paradigm of physicalism from the viewpoint of both its ontological status and the substantiation of its epistemological functions. Yet it is precisely at this point that physical explanation reveals its complete inadequacy: not only the physicalist language as a whole, but even the specificity of the existence and functioning of its elements (signs) cannot be described and comprehended in physicalist terms, since the physical properties of a sign, i.e. its mass, energy and other characteristics are totally indifferent to its meaning (one and the same meaning can be expressed by an unlimited number of signs having very different physical characteristics).

Thus it transpires that the physicalist language itself cannot be exlpained in the terms prescribed by the paradigm of physicalism; in order to vindicate the physicalist language and define its effective sphere one needs a far more substantial theoretical and philosophical backing. This is conclusive testimony to the inadequacy of the programme of physicalist reductionism and of its attempt to identify the mental with the physical as allegedly the only way to explain psychic phenomena scientifically.

The identity theory in fact ignores those categorial structures of scientific knowledge which express the specificity of biological and social self-organisation and are essentially independent of the categorial structures of physics. The result is an illusion that a material object possesses only physical properties irrespective of its complexity. An attempt to prove this false thesis has been made, for instance, by Frank Jackson.[9]

The author proceeds from the premise that a physical property is a "property with a place in the physicist's account of material things", and a non-physical property is a "property without a place in the physicist's account of material things". To support his view that material things possess exclusively physical properties and that any attempt to endow them with non-physical properties is absolutely futile, he adduces this argument: if the perception of a certain property of an object, for instance, colour, is determined by its effect on the brain and if this perception is conditioned by certain brain processes, then the property of the thing has a physical nature, since neurophysiology has proved that the causal effect of a material thing on the brain is a function of exclusively physical properties of this thing.

Jackson's argument does not hold water. Firstly, the author does not define the terms "property" and "material thing" leaving us in the dark as regards the content of the terms. For instance, is Aristotle's wisdom his property and can we include Aristotle in the category of "material things"? Or, is the term "thing" a "material thing" and is the meaning of this word its property? If it is so, the falsity of the author's conclusion is indubitable. If it is not so, his conclusion refers only to some "material things" and some "properties" described in physical terms and, consequently, is a pure tautology (the premise implicitly contains the conclusion).

Secondly, the statement that the causal effect of a "material thing" on the brain is a function only of its physical properties is not correct. Some "material things" have not only physical, but also chemical, biological and social properties, and in many cases the causal effect on the brain will be determined by these non-physical properties.

Such a possibility is attested to by the fact that, besides a purely physical causality there exists a specific kind of causal relationship which may be called "information causality".[10] The specificity of information causality (in respect of purely physical causality) consists in that the causal effect in the brain or in another self-organising system is determined by information as such and not by the physical properties of its vehicle since information is invariant relative to the physical properties of its vehicle. For instance, red colour can produce very different causal effects in the brain depending on the kind of information it conveys to the individual; besides, the information conveyed through the agency of red colour can be coded and transmitted in the form of an acoustic signal or by any one of a multitude of other physical carriers. The code relationship characteristic of information causality undoubtedly represents an objective property of some "material things", yet this property cannot be called physical. Hence, we can assert with good reason that at least some "material things" possess non-physical properties.

Of course, it is necessary to demarcate more accurately the class of non-physical objective properties (this task falls outside the scope of our work and should be an object of a special investigation). If anything, such a clarification will help put an end to various spiritualistic speculations, not infrequently in a scientific disguise.* However, it would be utterly wrong to conclude, together with the "scientific materialists", that the acknowledgement of non-physical properties is tantamount to the equation of materialism with radical physicalism.

Curiously, the same arguments are used by determined opponents of "scientific materialism"—the dualists like Polten, but this time against materialism. Reasoning from the existence of non-physical properties, they make out a case for dualistic interactionism. Strange as it may seem on first glance, Polten's methodological views also exhibit a strong bias towards the paradigm of physicalism.

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* One example of such speculations is the hypothesis of parapsychological phenomena extensively drawn upon by theologians and downright spiritualists.

Here is a typical example of Polten's reasoning in his polemic against the "scientific materialists". Two observers A and B perceive approximately equally the blue smooth surface of Lake Ontario. Yet, according to Polten, if A could expose his brain, B would not be able to perceive the phenomenon of the lake blueness identical with the processes in A's brain.[11] In contrast with physical phenomena, the mental ones are not publicly observable. This, in Polten's view, is the main distinction of the mental from the physical resulting from the general nature of mental phenomena (ibid.) Hence, the physicalist explanation of mental phenomena is impossible. Yet from this generally correct proposition Polten draws the following conclusion: explanation of mental phenomena is only possible from the position of dualistic interactionism which posits the objective existence of two worlds—the world of mental entities as things in themselves and the world of material entities as things in themselves (ibid.).

As we see, having rejected the physical explanation of mental phenomena as untenable, Polten at once substitutes for it a philosophical explanation based on the dualistic doctrine. Yet a physical explanation is one of scientific explanations and Polten, throwing it overboard, cannot offer any other scientific alternatives being unaware of their existence. It appears that the paradigm of physicalism in Polten's eyes is a kind of scientific maxim in general the inadequacy of which can only be overcome by philosophic dualism. Significantly, this inadequacy, in Polten's opinion, shows up only when we try to explain mental phenomena; as regards the "world of material entities as things in themselves", the paradigm of physicalism is completely satisfactory. This latter statement, however, is also false.

It is characteristic that, Polten never distinguishes between a scientific and a philosophical explanation which tends to create an impression that an explanation from the position of dualistic interactionism is a scientific one. This confusion, i.e. failure to draw a sharp line of demarcation between a philosophical and a purely scientific explanation based on concrete empirical principles and methods is typical of scientistically oriented conceptions of the relation between the mental and the physical.

Unlike the "scientific materialists" who seek to elevate a scientific explanation to a philosophical status thereby continuing the positivist tradition, their dualistic opponents strive to pass a philosophical explanation for a scientific one (in the above-indicated sense). Both approaches are characterised, first, by a confusion of the categorial levels of philosophical and scientific knowledge (the diffusion of these interconnected but nevertheless specific categorial structures is not infrequently masked by the introduction and use of the so-called metascientific principles) and, second, by the failure to distinguish (or by the disregard of) the categorial level known as general-scientific in Marxist literature. This level, retaining its specificity, performs at the same time an important mediatory function of connecting the philosophical and scientific categorial levels.

Over the last few decades general scientific notions have acquired special importance in scientific knowledge and are exerting a great influence on the development of philosophy.[12] General scientific categorial structures play an important part in the processes of the integration of scientific knowledge. What I mean is a complex of very broad notions evolved mainly in the process of the extensive development of the theory of information, cybernetics, semeiotics, system and structure investigations. This complex includes a group of notions such as self-organising system, control, signal, code, etc. which are closely connected with the category of information and permit, in my opinion, adequate description of interrelated mind-brain phenomena. This informational approach opening up new prospects before science will be discussed in the next chapter.

The essence of this approach consists in that the relation between a phenomenon of consciousness and its brain neurodynamic equivalent is treated as a relation of information to its vehicle regarded as its code. The relationship between information and its material vehicle is essentially different from all known kinds of physical relationships (by virtue of the principle of invariance of information in respect of the physical properties of its vehicle). This invalidates the physicalist descriptions and explanations of the mind-brain relationship in principle.

The informational approach, as we shall see later, appears to be a feasible and inspiring alternative to the identity theory advocated by the "scientific materialists". Yet it is not a philosophical alternative offered by Polten, but a scientific one despite its general and not specific form. The informational approach permits differentiating and correctly correlating the philosophical, general scientific and concrete scientific categorial levels in the investigation of the mind-brain problem. Unlike the philosophical problem of matter, the mind-brain problem is of a general scientific character; the close interrelation of these problems, however, gives no reason for their confusion.

Constant awareness of this demarcation is an indispensable condition for a well-grounded critical analysis of "scientific materialists'" conceptions, including those which mark a deviation from or even break with the paradigm of physicalism. As has already been noted, one such conception is offered by "functional materialism" whose representatives criticise the paradigm of physicalism and attempt to develop the doctrine of "scientific materialism" on an essentially new basis. This trend deserves a special analysis.

3. "Functional Materialism" and Use of General Scientific Notions in the Investigation of the Mind-Brain Problem. Conception of "Emergentist Materialism"

"Functional materialism" as a peculiar offshoot of "scientific materialism" mainly owes its appearance on the philosophical scene to the development of cybernetics which has provided a basis for a functional approach to the investigation of complex self-organising systems. The exponents of functional materialism (Putnam, Fodor, Danto, Luce and others) voice their disagreement, though with different accents, with propositions of radical physicalism contending that mental phenomena can only be identified with definite functional relationships and not with physical processes as such. For this reason, they aver, the paradigm of physicalism cannot provide a basis for the solution of the psychophysiological problem.

For instance, Putnam points out that the "functional organization of a system is logically different in kind either from descriptions of its physical-chemical composition or from descriptions of its actual and potential behaviour".[13] Functional properties are not reducible to any known physical properties. To substantiate this thesis, the author adduces the example of the Turing machine which can be realised through elements having different physico-chemical properties. Therefore, "if Materialism is taken to be the denial of the existence of 'nonphysical' attributes, then Materialism is false even for robots".[14]

Deplorably, Putnam knows only old mechanistic materialism and its modern physicalistic modification. Dialectical materialism does not exist for him. Hence his attacks against "modern materialism"[15] by which he means radical physicalism. Demonstrating its unsoundness, Putnam develops his own conception making a bid for what may be called "cybernetic materialism"; this, in fact, does not overstep the limits of "scientific materialism", as it makes the materialist doctrine in general completely dependent on the achievements of a definite branch of science.

It should be noted, however, that the "functional materialists" make an important advance on traditional physicalism in the understanding of the mind-brain problem and, consequently, of the unity of scientific knowledge. Thus, according to Fodor, the traditional physicalist approach to the problem of the unity of scientific knowledge is "in need of liberation": "if the doctrine of the unity of science is to be preserved, it will have to require something less (or other) than reducibility as the relation between constructs in neurology and those in psychology. It seems, then, that scientific theories can fit together in more than one way, perhaps in many ways".[16] Characteristic of Fodor is also the interpretation of brain processes correlated with mental states as "functionally equivalent neurological states". He holds that a reasonable version of materialism should be based on a taxonomy of neurological states according to their functionally equivalent brain states. As we see, Fodor's notion of materialism is also typically scientistic.

Far more important, however, is the methodological orientation of the "functional materialists" evolving from their denial of the paradigm of physicalism and approximating in some respects to the informational approach mentioned earlier. Of course, they have never defined the concept of such an approach in clear terms, nor do they even use the notion of information in their constructs. Nevertheless, the role of integrating means in their conception is no longer assigned to physical notions; such means are represented by general scientific categories most of which have been put into circulation and enriched by rapidly developing cybernetics and the associated branches of natural science. These categories, such as system, model, substrate, structure and others, as well as the mind-brain problem itself, are regarded by the functional materialists as philosophical. The upshot is the scientification of philosophical problems. The improvement of "functional materialism" on the physicalist conceptions of "scientific materialism" consists in that it generally identifies philosophical problems not with specific, but with general scientific issues. This tendency which manifests itself in different forms seems to be rapidly increasing in Western philosophical thought.*

The functional approach to the psychophysiological problem reveals itself in a number of theoretical constructs. Special mention should be made of Danto's conception which continues the general antiphysicalist line of "functional materialism". According to this conception, mental states notable for intentionality should be regarded not as identical with physical processes in the brain, but as identical with some meaningful linguistic structures of the brain. Mental states, in his opinion, are nothing else than the meanings of certain brain states similar to sign systems. Such systems, being essentially physical processes, function in accordance with linguistic rules determining semantic relations of the corresponding brain configurations to phenomena of the external world.

Danto's opponents criticise his conception, first, for unfounded identification of psychic and linguistic structures and, second, for its failure to achieve the principal goal—substantiate materialism, since the conventional factor characteristic of linguistic relations cannot be identified with any physical properties of brain processes. Thus George Sher holds that Danto's "exotic version of materialism" is untenable as it leaves open the question of the methods for reducing intentional states to the physical basis.

Though some critical remarks of Sher are not devoid of ingenuity (particularly those concerning conventionality as an expression of social significance, the relationship of the individual-subjective and the social-intersubjective in intentional states and their possible links with brain processes), the author's views on the mind-brain problem are in the main firmly rooted in the paradigm of physicalism.

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* One of such forms consists in an attempt to rate systems investigations as philosophical research and to create the so-called systems philosophy as a theoretical basis for the solution of the mind-body problem.

Considerable interest has been evoked of late by C. A. Hooker's publication which is directly concerned with the informational approach to the mind-brain problem. The author's stand deserves special consideration.

Pointing out the broad and fruitful use of the notion of information in neurophysiological research, as well as in the explanation of the structure and functions of consciousness, Hooker sets himself a task to make a "contribution to the categorical transformation of our usual statement of philosophical problems".[17] In contrast with Danto, he rejects the thesis that all knowledge has a linguistic nature and that psychic processes are represented in the brain by linguistic structures: "the brain contains a great deal of conceptualized information not expressible in any natural language" (ibid., p. 6). In his opinion, we should speak not of linguistic, but of information structures and processes in the brain: "Language represents only a small, specialised subset of that structure" (ibid., p. 4).

Hooker's propositions by themselves appear to be quite sound. However, he identifies information both with consciousness and brain processes integrating them in a single notion of information concepts or information structures. Invariably using the terms "mind" and "brain" as equivalents (and reemphasising his attitude by such expressions as "mind-brain" and "mind (brain)"), the author in fact tries to pass off the elimination of the mind-brain problem as its solution.

The category of information acquires in Hooker fundamental philosophical significance expressing the basic structure of being in which distinctions between objective and subjective reality, the spiritual and the corporeal are "sublated". Giving such an interpretation to the concept of information, Hooker endows information structures with spatio-temporal characteristics and a kind of autonomous spiritual activity and claims to offer a method for restructuring key philosophical problems by creating a new systematic ontology (ibid., p. 15).

A tendency to use the category of information as a philosophical master-key to ontological problems in the manner of Plato (or as an equivalent of Aristotle's entelechy) is now characteristic of a number of prominent Western natural scientists discussing philosophical issues of science and world-view problems. For instance, Gerhard Schramm regards genetic information as an ideal factor and holds that genetics confirms Plato's teaching. Carl von Weizsäcker views the concept of information as the principal means for unifying scientific knowledge and grants it an ontological status in fact identical with that of Plato's eidos. Similar views are held by V. D. Foster who propounds a conception of ontological reason in line with "cybernetic idealism".

Such idealistic leanings on the part of leading scientists are largely referable to the need for an integrated approach to modern scientific knowledge, a desire to get rid of the blinders of the physicalist paradigm and bridge the traditional gap between the categorial structures of natural and social sciences. However, this real need for a unity of scientific knowledge receives a wrong orientation from the outset and the truth seekers get into the old rut of objective idealism which is prepared to "unify" anything but is unable to offer any genuine solution to their problems.

The category of information does possess an integrating function on the general scientific level, and from this point of view the informational approach may be regarded as an alternative to the paradigm of physicalism. However, when this category is construed as eidos or entelechy, a kind of all-embracing ideal entity, it loses its real meaning or becomes superfluous. The methodological futility of this trick is obvious, as it fails to take into account the difference between general scientific and philosophical concepts and turns their connection into identity. This creates but an illusion of overcoming the real theoretical difficulties which are involved in attempts to correlate and integrate the categorial structures of the natural and social sciences. Yet it is precisely these theoretical difficulties which constitute the core of the mind-brain problem and prove insuperable for the paradigm of physicalism and the related conceptions of "scientific materialism".

Successful investigation of the mind-brain problem calls for its preliminary assessment on the philosophical and general scientific levels in order to provide research with true general world-view and methodological guidelines. Such an assessment, however, can only be undertaken from the position of dialectical materialism with due regard for the unity and diversity of the philosophical and scientific (general and specific) categorial levels.

Of special interest is a relatively new trend known as "emergentist materialism". Its adherents defending the materialistic principles attack the idealistic and dualistic solutions of the mind-brain problem and simultaneously come out against radical physicalism. Their opposition to "scientific materialism" varies in degree, but it is obvious. Mario Bunge's article published in Russian and devoted to the criticism of psychophysical dualism[15] gives a fairly accurate idea of the theoretical stand of the new trend. It clearly shows a deviation from the positions of radical physicalism and reductionism. The author underscores the qualitative distinction of the biological from the physical, criticises the mechanistic approach to life and the psyche and rejects attempts to identify the brain with the machine. He rightly points out that there is no need to resort to the pluralism of substances for explanation of qualitative distinctions existing in the objective world (ibid., p. 82). Such qualitative distinctions—the physical, the biological, the social—express the development of the material world. According to Bunge, the emergence of a new quality is a product of natural evolution whose main stages are established by scientific investigation; the mental also appears as a result of a law-governed development of complex material systems. Expounding in this way his conception and calling it emergentist materialism, the author sees its essence in the denial of the pluralism of substances and the acknowledgement of the pluralism of qualitative distinctions (qualitative diversity) of a single material reality; this reality is in a state of constant development and therefore capable of producing qualitatively new formations when passing to higher systemic organisation (ibid., p. 80).

This interpretation of materialism is essentially different from that of the radical physicalists. It is undoubtedly a step towards dialectical materialism, an attempt to overcome the deadlock of extreme reductionism with its utter inability to account for mental phenomena, social processes, culture—in short, for the higher forms of the movement of matter—within the framework of a single doctrine.

However, Bunge's views on a number of crucial issues are not free from contradictions. He has not yet fully shaken off the fetters of physicalism and sometimes fails to pursue consistently the principles of "scientific materialism" in the analysis of various aspects of the mind-brain problem. Thus in his article he contends that the scientific explanation of mental phenomena boils down to the translation of "mental terms" into neurophysiological ones in the manner of the physicists translating phenomenal terms into theoretical terms. This viewpoint is untenable since it, firstly, ignores the specificity of mental phenomena and in fact identifies them with the objects of physical research (by eliminating the axiological-semantic characteristics of the mental and thereby reducing the mental to nought) and, secondly, rules out the possibility of any explanation of mental phenomena along lines different from neurophysiological explanation and thus confines the problem to the narrow limits of natural scientific study denying any role to social sciences and social conceptions in its investigation. This is the weak spot in Bunge's critical analysis of the idealist and dualist doctrines.[19]

The defence of emergentist materialism by Norman Swartz[20] appears to be much more consistent. The author seeks to show that the principle of emergence can be naturally integrated with the materialist world view; this, in his opinion, provides a more profound substantiation of materialism and at the same time permits accounting for the phenomena of life and the mind. Swartz holds that the property of emergence is a new historical formation inherent only in elements making a whole system; its description is based in the "discontinuity hypothesis", i.e. break of continuity, which is tantamount to the recognition of qualitatively higher levels of organisation irreducible to the lower levels of the same system. Hence, in Swartz's view, the futility of the radical physicalists' attempts to treat the "phenomenological states" (e.g. sensations) as properties of physical (electrochemical) processes in the brain; the "phenomenological states" are properties of "emergent global brain-states". Swartz analyses in detail the logical aspects of the conception of emergence and shows that it does not contradict any of the known physical laws; simultaneously he puts forward cogent arguments against the physicalists who have repeatedly raised objections to the principle of emergence on the grounds of its alleged incompatibility with the laws of physics. Conceding the existence of so far unknown physical laws which might account in future for "phenomenological states", Swartz also pays some tribute to the paradigm of physicalism.

The conception of "emergentist materialism" has attracted the attention of a number of Western neurophysiologists and psychophysiologists. It is shared, for instance, by Roger Sperry, an outstanding contemporary neurophysiologist whose investigations into the functioning of the right and left cerebral hemispheres evoke wide interest. The results of these investigations provide a basis for interesting philosophical discussions of such problems as the identity of an individual's consciousness, the structure of the Self, the relation of language to thought, the dependence of different components of thought on the right or left cerebral hemispheres and their joint work. Such and similar discussions are centred on the nature of links between consciousness and brain processes, the mind and the body.

Sperry himself shows keen interest in the philosophical and general psychological aspects of the obtained results and seeks to evolve his own conception of the mind-brain relationship. He bases himself on the understanding of consciousness as "emergent property of brain activity"[21] and rejects from this position other solutions offered by the proponents of epiphenomenalism, parallelism, the two-aspect theory, the psychophysical identity theory and by the adepts of semantic nihilism (discarding the mind-body problem as a pseudoproblem).

Sperry sets himself against radical physicalism and reductionism, including the identification of mental phenomena with neurophysiological processes. At the same time he seeks to account for the activeness of consciousness from the materialistic positions. He writes: "The causal power attributed to the subjective properties is nothing mystical" (ibid., p. 120). "The whole has properties as a system that are not reducible to the properties of the parts, and the properties at higher levels exert causal control over those at lower levels" (ibid.). Proceeding from this thesis, Sperry comes to regard mental phenomena as a factor of control and attempts to show that "mental activeness", the psyche, emerges as an outgrowth of the biological "evolutionary process of freeing behaviour from its initial primitive stimulus-bound condition, providing increasing degrees of freedom of choice and of originative central processing. The subjective effects have additional advantages in the driving and directing of behaviour as motivational elements and as positive and negative reinforcers" (ibid., p. 121).

This is undoubtedly an attempt to give a materialistic account of the activeness of man's psyche. One may be dubious, of course, about this or that point of Sperry's conception, but it would be certainly wrong to assert that he "is seeking a middle ground between a monistic materialism and a dualistic interactionism".[22] Such a conclusion can only be made from the position of radical physicalism. In my opinion, the cited passages about the mind-brain relationship and the activeness of the psyche vouch for Sperry's critical attitude to dualism, particularly to those of its representatives who appeal for support to neurophysiology and psychophysiology (as compared with his propositions the arguments of the "scientific materialists" against dualism appear to be much weaker).

The most comprehensive exposition of the doctrine of "emergentist materialism" has been presented by Joseph Margolis[23] who gives a detailed analysis of various aspects of the mind-body problem, investigates into the relationship between natural and social sciences and makes a stand for "nonreductionist materialism". The author discusses at length different versions of "scientific materialism" and shows their inability to explain psychic and cultural phenomena. At the same time he convincingly demonstrates the untenability of the view that man's spiritual world and the progress of culture can only be explained on the theoretical basis of idealism and dualism. Margolis contends that "the rejection of ontic dualism (Cartesianism) leads not to the identity thesis but to ontic monism" (ibid., p. 58), the most adequate form of which is materialism. Its crucial advantage over idealism consists in the ability to construct a logically impeccable monistic theory of the world and thereby to ensure the unity of scientific knowledge. This task, in the author's opinion, can only be shouldered by "emergentist materialism" which is more flexible than "scientific materialism". From the viewpoint of "emergentist materialism", mental and cultural phenomena are conceived as emergent properties of highly organised material systems. Such properties are necessarily embodied in material objects as the products of their development. They are composite by nature, i.e. represent a new quality as a unitary whole and cannot be reduced to the properties of individual elements or subsystems of the system in which they are incorporated. Hence the untenability of physicalism and radical reductionism.

The author, using his own words, argues the viability of the new doctrine in a dual way: "by considering the weakness of standard theories—the identity theory, physicalism, eliminative materialism, behaviourism, and the like, and by way of explicating, dialectically, the principal features of mental life that bear on providing a comprehensive account of such phenomena and on appraising the adequacy of competing theories regarding those phenomena-consciousness, sentience, intention, thought, desire, emotion, action, and speech" (ibid, pp. 9, 10).

It is highly significant that in his attempts to overcome the narrowness and inconsistency of physicalist materialsm Margolis invokes dialectics and makes extensive use of the categories of quality, wholeness, system, development, and the like. The author in fact acknowledges that a consistent and fruitful conception of materialism capable of superseding the idealistic (and dualistic) doctrines and providing a solid world-view and methodological foundation for modern science can only be based on the principles of dialectics.

Yet one would vainly try to find if only a mention of dialectical materialism or a single reference to works by Soviet philosophers in Margolis' book. As a result, the author often holds out as a revelation what is but a truism in Marxist philosophy. On the debit side we must also put a certain meagreness of dialectical notions manipulated by the author.

Despite these shortcomings Margolis' conception deserves close attention of the Marxist philosophers. The inception of "emergentist materialism" is a notable event testifying to crucial conceptual stratification in the materialistically oriented branch of Western philosophical thought. This tendency shows up in a rapid devaluation of physicalism and reductionism, i.e. in a further deviation from the canons of logical positivism. It is highly significant that despite certain inconsistencies in applying dialectical principles, the most progressive representatives of materialistic thought generally gravitate towards dialectical materialism. This is yet another proof that the contemporary trends of materialism committed to the cause of scientific and social progress, opposed to idealistic inroads and capable of providing philosophical guidance in the solution of human problems are bound to merge with dialectical and historical materialism.

NOTES TO CHAPTER 5

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[3] D. M. Armstrong, "The Nature of Mind", in: *The Mind-Brain Identity Theory*, St. Martin's Press, New York, 1970, p. 67.

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[9] F. Jackson, "Do Material Things Have Non-Physical Properties?", *The Personalist*, Vol. LIV, No. 2, California University Press, Los Angeles, 1973, p. 105.

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[13] H. Putnam, "The Mental Life of Some Machines", in: *Modern Materialism: Readings on Mind-Body Identity*, p. 281.

[14] Idem, "Robots: Machines or Artificially Created Life? in: *Modern Materialism. . .* , p. 246.

[15] Idem, "The Mental Life of Some Machines", pp. 270-278.

[16] J. A. Fodor, "Materialism", in: *Materialism and the Mind-Body Problem*, Prentice-Hall, Englewood Cliffs, 1971, p. 149.

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Chapter 6.

Informational Approach to the Mind-Brain Problem As an Alternative to "Scientific Materialism"

1. The Ideal and Information

Since the relation between the categories of the ideal and information has already been discussed in detail elsewhere,[1] I shall merely outline here my stand and then give a few additional considerations concerning the informational approach to the problem of the ideal.

In the context of this analysis information is construed in the categorial sense—as the "message content" (N. Wiener), or the *content of reflection* at the level of self-organising systems.* Information is necessarily embodied in a material (or, more accurately, substrate, physical) vehicle which poses as its code. Information can only exist as a special, functional property of a highly-organised material system. It represents, as it were, a certain significant object of the system wherefore it has not only a formal, but also a conceptual (semantic) and axiological (pragmatic) aspects. The relation between information and its code embodiment which alone provides the framework of its existence is a simple one in each particular case. Yet in principle one and the same information (identical from the viewpoint of its formal, contentwise and axiological characteristics) can be embodied in and conveyed by different vehicles and codes which may differ from one another by spatial, temporal, substrate, energy and other physico-chemical variables. This is what I mean by the *principle of invariance of information relative to the properties of its vehicle*. I hold that this principle is of fundamental importance in so far as it permits comprehending the *historical* (in a certain sense creative) character of new code formations.

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* The notion of information taken in the categorial sense is logically independent of various conceptions of information quantity (probability conception, algorithm conception, and others) and, accordingly, of the notions of the quantity of information, though the latter do not contradict the former.

The category of information is a notion of general scientific level (or, in any case, very broad and adopted by most branches of science). It owes its genesis not only to cybernetics and the theory of information, but also to semeiology, science studies and a number of other disciplines. Since information can only exist in the code form, it also includes description of the *code relationship*, i.e. connection of given information with a given code vehicle. This makes it possible to integrate on one theoretical plane the conceptual-axiological description of information as such (specific for the language of humanistic disciplines) with the description of its vehicle (code) given within the categorial structure of natural sciences (in terms of spatial parameters, substrate properties, mass, energy, etc.).

As we see, the category of information and concepts directly related to it possess an extremely important integrating function exercised by them on the borderline between humanistic and natural sciences. For this reason this category may serve as a logical link between the philosophical category of the ideal and those notions which reflect the results of scientific investigation into the mind problems.

In Soviet literature information is commonly viewed from two perspectives which may be called attributive and functional. The adherents of the attributive approach maintain that information is a property inherent in all matter, including every object of inanimate nature. By contrast, the adherents of the functional approach regard information only as a property of self-organising systems which evolves at the animate level. I subscribe to the second conception.

We may distinguish four principal forms of information: first, the *prepsychic* form (e.g. at the DNA-RNA-protein level) when the content of the information process has no subjective representation; second, the *psychic* form, when the content of the information process has subjective representation ranging from sensations and emotional response to consciousness. This form of information includes the subjective realities of both animals and man which, of course, are qualitatively different; third, the *animal-related objectified* form, when information is materialised in the results of animals' activity and traces of their behaviour (a bird's nest, an ape's tool, footprints on sand, etc), fourth, the *society-related objectified* form representing the results of man's activity (including those he keeps contact with by deobjectifying them and those he had lost contact with).

The above taxonomy, crude as it is, only serves to underscore the difference between the psychic form of information on the one hand, and the prepsychic and extrapsychic (or better postpsychic) forms, on the other hand. Since information is regarded as the *content* of the reflection of a certain object by a self-organising system, represents a *value relation* and poses as a *factor of control*, the concept of information may be coherently used for description and explanation of psychic phenomena.* It has indeed become quite common in theoretical research not only in psychology, but also in psychotherapy[3] and in psychiatry.[4]

There is every reason to regard any phenomenon of subjective reality, consciousness including, as information. Any act of consciousness is intentional, it is always *information about something*. Again, the consciousness of an individual viewed as a unitary whole can be presented as an information structure. The opinion that such an approach tends to belittle the philosophical significance of the notion of consciousness, eliminate consciousness in favour of information and give way to "cybernetic reductionism" appears to be completely groundless, since consciousness can have many different predicates, and information is but one of them. The definition of consciousness through the notion of information is only intended to bring out and specify one of the dimensions of this complex category.

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* Some psychologists, however, may charge us with "cybernetic reductionism". For instance, O. Tikhomirov considers the concept of information to be completely unsuitable for description of psychic phenomena as it expresses only what is inherent in the operation of a technical device. This is a very narrow interpretation of the concept of information. Tikhomirov goes even so far as to rate the use of the concept of information for description of unconscious psychic processes as a deviation from the "dialectical-materialist orientation in psychology".[1] According to Tikhomirov, the concept of information (information processing) applied to psychological research almost poses the main threat to the progress of psychology. It is our conviction that such fears are hardly grounded. Of course, the use of this concept in psychology should not overstep reasonable limits. On the other hand, attempts to preserve at all costs the sterile purity of the classic language of psychology and the comfort of settled conceptual patterns are hardly conducive to the solution of topical problems in this branch of science.

This equally applies to the use of the notion of information for defining the ideal. Indeed, such use permits focusing on the specific method whereby information is "given" to or "represented" in man's mind, on its self-reflection and self-transformation in the form of man's subjective reality notable for a high degree of autonomy of its "content". Owing to such autonomy, the content of subjective reality is free from any spatio-temporal constraints and immediate objective reality. As a result, man's imagination can break out of the narrow confines of time and space and fly on the wings of thought, dream or hope to wonderful lands, create castles in the air, construct fantastic material forms and utopian human relations, playing an infinite variety of mental games. The ideal viewed from the angle of the information theory may be defined as the *givenness of information in a "pure" form and an ability to manipulate it with a high degree of arbitrariness.*

Of course, in reality information does not exist apart from its material vehicle. The information given to man as phenomena of his subjective reality (as *his own* sense images, thoughts, goals, etc.) is of necessity embodied in definite brain neurodynamic systems, which are its material carriers. Yet these carriers are closed to subjective reality and do not lend themselves to direct reflection. When I see objects, think of something, conjure up different situations, I am in fact processing certain information about external objects and my own self which represents the givenness of a certain dynamic "content" of what is reflected in my sense images, thoughts and dreams.

The brain vehicles of this information are completely eliminated from man's consciousness and he is not aware of them. He does not know what processes take place in his brain when he is manipulating different pieces of information. This is a cardinal characteristic of man's mental organisation which is known as the givenness of information in a "pure" or ideal form, i. e. in the form of phenomena of subjective reality.

Here I shall clarify once more, at the risk of seeming obtrusive, the aspect of the ideal where this category allows interpretation in terms of the category of information. Since any information is necessarily embodied in a concrete material vehicle, i.e. in a definite code, it poses as an objective code relationship leaving no room for the category of the ideal. In this respect all forms of information are equal.

What is called the ideal is connected with only one existential form of information, the psychic form, and characterises but one, specifically social method of its representation—the givenness of information to an individual in a *"pure"* form, i.e. in the form of phenomena of subjective reality, as well as the individual's almost unlimited ability to manipulate this information (and, consequently, his subjective reality).

Being a result of reflection, information is always secondary. Being embodied in its code, it is always material. As regards the relation between the categories of the ideal and information the former can be used correctly only for description of one of the methods whereby information is given to man. Indeed, many information processes taking place in man's mind and being of crucial importance are confined within the prepsychic sphere and never reach the level of subjective reality. At the prepsychic level information is nothing else than an objectively existing functional relationship. In principle, it preserves this status at the level of conscious processes too, but there the reflection doubles up, as it were; on the one hand, its content is recorded in a definite organisation of the brain code in the shape of an equivalent neurodynamic structure, on the other hand, this content is given in its pure form, i.e. in the form of information as such, not handicapped by the substrate organisation of its vehicle (code).

To clarify this point, I shall use this analogy: when I say "it is raining", this content is recorded in the speech code and realised in the corresponding phonetic organisation (the latter is conditioned by the equivalent neurodynamic organisation in the brain providing for coordinated work of the organs of speech). Yet for me as a person, as well as for the one who is listening to me and understands my words the above indicated content is represented in a pure form as a thought, an image. Nevertheless, we can, if necessary, analyse and describe the phonetic organisation of the speech code which carries a definite content.

This crucial feature of the information process taking place in man's mind is what is termed "subjective reality" in the philosophical language. If we intend to study man as a conscious social being, we cannot under any circumstances ignore the *quality of subjective reality* nor reduce it to objective reality. The ability to receive and manipulate information in a pure form is a product of social development and improves with the progress of society. The linguistic capacity sets persons apart from sentient creatures and marks the emergence of a new type of self-organisation as it conditions a qualitatively higher level of activeness (the reflective, goal-setting and constructive-transformative functions in the first place). It is only from the position of radical physicalism averse to the idea of information causality and information interaction that the phenomena of subjective reality could be described as *epiphenomena*, i.e. as useless incorporeal doublers of neurodynamic brain processes.

Seeking to establish logical links between the categories of the ideal and information, one should class as ideal predominantly the above indicated existential and functional form of information, i.e. the specific way of its givenness to a self-organising system (enabling the self-organising system to manipulate information with ease and promptness in accordance with the purposes of the system and opening broad possibilities for its transformation and expansion, i.e. for what is called creativeness).

Today's chiefly natural-scientific exploration of the mind is notable for extensive use of general scientific notions which are instrumental in the conceptual interpretation of relevant problems and results of investigations and centre upon the category of information. These notions are logically correlated with the category of the ideal thereby exercising an important methodological influence on specific research of the psyche and stimulating the development of new theoretical guidelines and corresponding experimental approaches with due regard for the quality of subjective reality (in contrast, for instance, with the approach of the behaviourists, "scientific materialists" and other radical physicalists who seek to sidestep, ignore or eliminate this quality with the help of special logical procedures).

It is highly significant that broad notions of general scientific value[5,6] play now an extremely important part in the integration of the natural and social sciences. Assimilating these notions, many classical branches of natural science tend to lose their "purity" and incorporate the cognitive means developed by social sciences into their theoretical and methodological apparatus. This tendency clearly manifests itself, for instance, in the branch of neurophysiology which is concerned with the problem of deciphering the brain codes of psychic phenomena. Preserving in the main its natural scientific orientation, this branch borrows the principles and methods of linguistics and cognitive psychology and draws extensively on the general notions of consciousness. General scientific notions serve here as a conceptual bridge between the classic categorial structures of natural science and socio-humanistic knowledge enabling the investigators of the problem of the ideal to profit by the results of scientific research into consciousness as a brain function.

This is all the more important in view of the still obtaining tendency to oversimplify the highly complex nature of consciousness and effect a direct logical transition from consciousness and even the ideal to physical or physico-chemical processes. To be sure, the results of physical and particularly chemical investigations may be crucial for the development of neurophysiology and correct understanding of many essential aspects of the informational activity of the brain. However, attempts to deduce consciousness directly from physical processes or construct mind models at the atom or elementary particle levels are, in my opinion, inevitably doomed to failure.

I hold that the most promising approach to the conception of consciousness viewed from the angle of its relation to the brain is the one based on the systemic principle of the brain processes exercising informational functions, as well as on the understanding of the qualitative specificity of the information (code) structures relative to purely physical or physico-chemical properties and processes. Such an approach opens up new theoretical prospects for the interpretation of the ideal in the light of the latest scientific achievements in the exploration of the brain and the psyche.

2. The Category of the Ideal and the Informational Approach to the Mind-Brain Problem

A detailed account of the informational approach to the problem in interest has already been given in one of my earlier works,[7] therefore I shall set out here only its basic principles directly related to the problem of the ideal.

The proposed approach aims at a conceptual solution of the mind-brain problem at the level of general scientific notions. In expounding the informational approach I shall follow the usual pattern: first, I shall state the basic premises expressed in relatively clear terms as the ground for discourse (if need be, they may be subjected to a careful critical examination), and then I shall deduce the logical corollaries providing answers to the principal questions of the problem under consideration.

I now set out these premises which have already been partly discussed earlier in this work trying to give them a more accurate and concise form as compared with my previous publications. After that, using them as a basis, I shall unfold my argument and give the necessary explanations.

1. *Basic premises:*

1.1. *Information is a result of reflection* (of a given object by a definite material system).

1.2. *Information does not exist outside its material vehicle* (always posing only as its property—structural, dynamic, etc.).

1.3 *A given vehicle of information is its code* (information does not exist outside a definite code form).

1.4. *Information is invariant relative to substrate-energy and spatio-temporal properties of its vehicle* (i.e. information which is identical for the given class of systems can be embodied in and conveyed by vehicles differing from one another by the above properties; it means that one and the same piece of information can be represented by different codes).

1.5. *Information possesses not only formal (syntactic) but also conceptual (semantic) and axiological (pragmatic) characteristics.*

1.6. *Information can be a factor of control*, i.e. it can initiate definite changes in a given system on the basis of an established code organisation (here I base myself on the concept of informational causality).

As far as we know, the above premises are generally recognised in Soviet philosophical literature. They have been accepted by the adherents of both the functional and the attributive interpretation of information. True, the latter only accept premise 1.5 in its particular form holding that the semantic and pragmatic characteristics are inherent not in every kind of information, but only in information at the level of living organisms and social system. Since in our conception the notion of information is only used for the description and explanation of mental phenomena, we may well presume that we do not differ on this point from the adherents of the attributive interpretation of information.

The above-indicated premises may be regarded as a set of postulates which are not refutable on empirical grounds, though we believe that each of them can be properly substantiated. We invite criticism anyway, since they must be capable of withstanding a test of maximum severity to serve their purpose.

If the above-indicated premises are acceptable, the next step will be to define the condition for their applicability to the mind-brain problem. For this purpose it is necessary to substantiate the thesis that *every phenomenon of consciousness is information* and to prove that *every phenomenon of consciousness is a brain function.* In doing so I shall proceed from the definition of consciousness as an ideal phenomenon since I consider it pivotal to my argument. I am particularly keen on this point since numerous attempts to solve the mind-brain problem either skirt the ideality of consciousness or even directly aim at eliminating the notion of ideality as a predicate of consciousness.

I hold that every phenomenon of consciousness is information about something. By phenomenon of consciousness I mean any actually experienced conscious state, any arbitrarily taken interval of a conscious state notable for diverse psychic modalities (sensory, logical, emotional, volitional, etc.). Each such interval has a certain content, i.e. represents certain phenomena of the outer and inner world. Consciousness is always intentional, it is a result of selective reflection and can never be "empty". In this sense it represents information about something that is peculiar to a given individual.

ousness as subjective reality exists only in a personal is constituted as a unique wholeness, as an individual's original and inimitable inner world. When we say that every phenomenon of consciousness is information we always imply that it is *somebody's* information and not only that it is information about something. It goes without saying that such kind of subjectivity of mental phenomena as information *about something* does not rule out intersubjectivity, i.e. the presence of the same kind of information in the minds of different persons.

As regards the statement that "every phenomenon of consciousness is a brain function", it hardly needs any special substantiation. I shall only note here that it does not in any way contradict the thesis about the social nature of consciousness, as the human brain is a product of both anthropogenesis and social development.

If any phenomenon of consciousness is information and at the same time a function of the brain, it means that the material vehicles of such information are definite brain processes (which are described at the present-day level of scientific development in terms of the brain neurodynamic system).

Let us now set out the next group of propositions which are implied in the informational approach and provide for a possibility of using the above-indicated premises for an explanation of a number of essential features of mental phenomena.

2.1. Every phenomenon of consciousness (as a phenomenon of subjective reality) is definite information inherent in a definite social individual.

2.2. Being information, every phenomenon of consciousness (subjective reality) is of necessity embodied in its material vehicle (by virtue of 1.2).

2.3. This vehicle is a definite brain neurodynamic system (of a given individual).

2.4. A definite brain neurodynamic system is (by virtue of 1.3) a code of the corresponding information represented to a given individual as a phenomenon of this subjective reality (for brevity's sake I shall use *A* for every phenomenon of consciousness or subjective reality, and *X* for the brain vehicle of such kind of information or its code).

Proceeding from the adopted premises (1) and additional propositions (2), I shall now try to answer those difficult questions which have for a long time made the subject matter of the mind-brain problem. They may be reduced to two principal questions.

I. How can we account for the connection between phenomena of consciousness, subjective reality, on the one hand, and brain processes, on the other hand, if the former cannot be assigned any physical and, for that matter, any substrate properties?

II. How can we account for the fact that phenomena of consciousness, subjective reality, control bodily changes (are capable of initiating, regulating and terminating them), if the former cannot be assigned any physical, including energy, properties?

The first question has already been answered in a general form. Connection between *A* and *X* is connection between information and its vehicle. It is a *special functional connection* characterised by the notion of *code relationship* which is a relationship of a given specific information represented in a given specific (in terms of organisation and physical properties) vehicle to the given specific self-organising system. The code as a concrete vehicle of a given information is an element of the self-organising system. In our case it is a neurodynamic code which is itself a complex system. *X* is a specific code of *A* outside which *A* does not exist. For this reason phenomena *A* and *X* occur simultaneously: if there is *A* there is *X*, and vice versa.

This proposition implies that not a single phenomenon of subjective reality exists as a separate entity, i.e. apart from its material vehicle. It is necessarily objectified in definite brain processes which rules out the idealistic and dualistic interpretation of the category of the ideal. Every phenomenon of the subjective reality of a given person proceeding within a given interval is realised through a brain code of the *X* type. If the latter is deactivated, the result is the loss of the corresponding subjective experience, its replacement by a different one (having a different content), or the termination of the conscious state as such.

Finally, a phenomenon of subjective reality is a definite "content" represented to the individual by the *X* type brain code. This "content", i.e. information as such, can be repeatedly recoded, represented in other types of codes, for instance, through a set of graphic signs, a set of sounds, etc. Such types of codes are capable of existing outside and independent of real persons, yet their "content", though intact, no longer belongs to the domain of subjective reality.

This latter circumstance is significant as it highlights the qualitative difference between, for instance, the content of a *thought* and the same content by itself (as information proper). Thus a book which has not been read by anybody may carry the content of its author's thought, yet in such a code form this content is not ideal. The quality of subjective reality belongs only to a definite type of brain codes. The ideal is only predicable of living thought and not of its content alienated from the person—such content can be presented in most diverse non-personal and non-brain codes (material, symbolic and others existing outside man).

More accurately, the ideal is directly connected with three types of codes only: the *brain* (predominantly neurodynamic) code, the *behavioural-expressive* code (motor acts and external bodily changes, particularly changes in the expression of the eyes and face), and the *speech* code. Only the first of them is of fundamental significance. The codes of the non-personal level can also be divided into three types: the *sign* code, the *object* code and the *"trace"* code (for instance, finger-prints, etc.). These codes represent information in a form estranged from the person and do not contain subjective reality as such.

The first, basic, question ramifies, so to speak, into several subquestions normally provoking heated debates. Let us now try to tackle them.

Ia. *Where is the location of a given phenomenon of subjective reality*? Can it be localised in terms of definite spatial characteristics? If it cannot, why?

Most authors discussing these questions resolutely reject the possibility of describing phenomena of subjective reality in spatial terms. To support their view, they adduce arguments of this type: a thought of the distance to Jupiter has no extension, any thought is a certain "content" and its description does not require any spatial characteristics (length, width, volume, etc.) which are necessary in the description of phenomena of subjective reality; it is senseless to assign spatial properties to what is called the ideal. However, the proponents of this view recognise, explicitly or implicitly, that phenomena of subjective reality may be coherently assigned temporal characteristics and, consequently, that living thought as a "moving content" alters in time. To this I must answer that the concept of something existing in one and the same sense in time, but not existing in space is profoundly contradictory as any change can only be conceived as spatial.

It has become common practice to describe individual consciousness in terms of *structure, system,* discreteness, sequence and orderliness of its phenomena. Understandably, these notions are used in such descriptions only by analogy, since their content is essentially different from the content of the same notions used in descriptions of spatial phenomena.

The answer to question Ia given in a general form is as follows: a given phenomenon of subjective reality (for instance, A_1) is located in its code (X_1) which, like all phenomena of objective reality, possesses definite spatial and temporal properties (is a spatially organised and localised subsystem of brain activity altering in time).

Let us consider this question in more detail.

The minds' organisation enables it to reflect the temporal parameter of phenomena of subjective reality, their "present" and "past", as a succession of contents and as a duration of the effective period of each content in the field of consciousness. It means that individuals are capable of reflecting the temporal parameter of at least some of the X type brain codes (i.e. their effective period, the moment of deactualisation and transformation of one code into another). However, they cannot reflect the spatial parameters and the substrate composition of the above indicated codes—their location as an integral system, not to speak of its components, elements, internal links, etc. The temporal parameter, it will be noted, is represented by the entire code and not by its dynamic components. I shall try to explain this feature of man's psychic organisation in due course (see Ic).

For the moment we need only acknowledge that the possibility of a direct spatial description of phenomena of subjective reality is ruled out by the very nature of code relationship, the character of relation between information and its vehicle (code). First, in virtue of 1.4 the spatial properties of the vehicle of one and the same piece of information may be different and are therefore not specific in this case for subjective reality. Second, in spite of the fact that the information-to-vehicle relationship is very simple at the level of integral wholes, it is by no means the case at the level of their components: the quantisation of a piece of information (for instance, a sense image) and the structure of its components do not correspond directly to the quantisation of the code and to the structure of its elements; we have here different types of orderliness and different types of wholeness. Since information is always (by virtue of 1.1) a *relation* of one to the other, a functional representation of one by the other, and since the representative (code) of information can possess, in principle, most diverse spatial properties, the latter turn out to be immaterial for the representation of a given piece of information. This circumstance stands out with special clarity at the level of developed code forms, such as, for instance, sign systems.

However, what is represented in a code is bound to have its own spatial characteristics (provided it is a phenomenon of objective reality*). These characteristics significant for a given self-organising system are typically reflected by it quite adequately, i.e. they are correctly represented in the corresponding code. However, they can be represented through its most diverse spatial characteristics. This is also the case with mass, energy and other physical characteristics of both the object and the vehicle of its representation. Therefore not only spatial characteristics, but also the concepts of mass and energy prove non-specific for the description of information as such, including information on the phenomena of subjective reality. Such description is always given in terms of what is represented and not in terms of the representative.

A certain invariant of information on the battle of Borodino may exist either in the living thought of a given person or, in a deactualised form, in his memory, as well as in books, film-strips, tape records, etc. In all these cases a reference to spatial, energy, mass and, in general, substrate characteristics of the code form of the above indicated information is immaterial for the latters' specificity.

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* Indeed, phenomena of subjective reality can also be reflected and represented.

Nevertheless, this information only exists in the corresponding codes which are of necessity localised in space. As we see, the question regarding the location of information is not so senseless as it may seem. It becomes crucial when we face the task of identifying the code object (i.e. the information carrier which is significant not because of its natural, physical, substrate properties, but because of its functional purpose, the *object* it represents) and when we must decipher the code, i.e. comprehend the information embodied in it. This code always has a *definite location*, though it may be easily transferred to another location. The same code may be duplicated and the copies may be distributed among different locations; finally, it may be converted into other forms of codes that will have their own specific spatial location.

Hence, one and the same piece of information may exist simultaneously in many places and its concrete location will have no bearing on the specificity of its content. It is, as a rule, indifferent to this location. Nevertheless, this information does not exist everywhere, it is generally confined to the spatial sphere of the existence of life and human society. If we want to obtain and "appropriate" this information (lodge it, as it were, in our brain), we must find at least one of its concrete locations where it exists in its actual form—a concrete code object (a thing, a sign or a set of signs, etc.) or a concrete individual whose brain codes embody the information we are interested in.

The question of the location of information in general or information of a definite kind deserves special consideration, but the scope of this publication forbids us to enter into detail. I shall only note here that the localisation of information in interest calls for a concrete approach and establishment of reasonable limits. Indeed, for most theoretical purposes the location of information should be confined to its code and not to a broader system which includes this code as one of its elements. If information is localised too broadly, the ensuing qualifications will be either trivial, or inaccurate and even incorrect. For instance, the information on the battle of Borodino in the form of living thought (phenomenon of subjective reality) exists only in the brain, though it may also be embodied in things and signs; defining its location too broadly, we let the quality of subjective reality slip off and lose the object of our investigation (thought).

One might rejoin that this thought exists in society, yet such an argument will be either a commonplace since man does not exist outside society, and our society does not exist outside the solar system, etc., or not quite accurate since one may get an impression that living thought is capable of existing in society somewhere outside the head of an individual. Should we unduly expand the borders of its localisation, we may arrive at a conclusion that the battle of Borodino occurred in the solar system*.

Ib. *How is it possible to account for the fact that the neurodynamic code objectively existing in the individual's brain is experienced by the individual as subjective reality*? This question is set forth with particular vigour when we try to probe into such kind of phenomena of subjective reality as sense image. Opponents usually ask: where and how can the brain contain the image of the tree that I am observing at the moment and how can one subjectively experience the image of a tree if the brain objectively does not hold it? To such a question authors of relevant publications give three types of answers.

Some authors maintain that the image of a tree resides as a copy in the substrate of the brain and that the only way to account for the mental experience of an image is to admit the existence of such material copies (physiological, chemical, etc.) in the individual's head. Such an opinion shared at present only by few is in sharp contrast with modern views on the brain mechanisms realising sensory and perceptive processes.[9]

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* Such loose reasoning has been aptly ridiculed by Hegel whose views are invoked by some authors in support of their opinion that it is inadmissible to localise thought within the brain.

"When, however, any one thinks of the proper place where mind exists, it is not the back that occurs to him, but merely the head. Since this is so, we can, in examining a form of knowledge like what we are at present dealing with, content ourselves with this reason—not a very bad one in the present case—in order to confine the existence of mind to the skull. Should it strike any one to take the vertebral column for the seat of mind, in so far as by it too knowledge and action doubtless are sometimes partly induced and partly educed, this would prove nothing in defence of the view that the spinal cord must be taken as well for the indwelling seat of mind, and the vertebral column for the existential counterpart, because this proves too much. For we may bear in mind that there are also other approved external ways for getting at the activity of mind in order to stimulate or inhibit its activity."[8]

Other authors, philosophers and psychologists, resolutely rejecting the above answer, come out against the very idea of material equivalents of an image in the brain on the grounds that the physiological and biochemical processes in the brain, the transmission of a nervous impulse, etc. cannot provide the clue to a mental image. What can account for it is, in their opinion, only the motility of the receptor, first and foremost the micromovements of the eyes reproducing the contours of the object being perceived. The advocates of the "anti-brain" theory also ignore the results of neurophysiological investigations into the processes of sensory reflection seeking to replace them by the study of object-related actions. As has been shown earlier,[10] the adherents of this approach proceed from the conviction that the experience of having a mental image can only be theoretically accounted for if we find its material equivalent (which they see in the micromovements of the eyes). As one can perceive, they share the methodological platform with the supporters of the first view.

Finally, some authors acknowledge that there are no "pictures" of a tree in the brain but only codes performing the function of neurodynamic equivalents of the image, but all the same contend that in order to explain the image experience it is necessary to assign the brain a special decoding operation whereby a code is "translated" into an image. Postulating a decoding operation, the proponents of this theory do not explain how such decoding can be carried out. Indeed, any decoding is in fact a conversion of one code into another (by virtue of 1.2 and 1.3), i.e. an "unknown" code into a "familiar" one (for a given self-organising system). Since the image of a tree is information embodied in a definite brain code and since information cannot exist outside its vehicle (the code), any reference to a decoding operation hardly explains anything.

I propose to solve this problem by distinguishing between two code forms: "*natural*" and "*alien*" codes. The difference between such codes lies on the surface and is obvious. The "natural" code is an element of a self-organising system. The information embodied in such a code is given to the system directly and "comprehended" by it immediately, without any decoding operation. The pulse-frequency code at the output of the eye retina is directly taken in by the relevant brain structure. The meaning of the word "tree" is grasped by the reader directly, without any special analysis of physical and other properties of the code.

Contrariwise, a code "alien" to a given self-organising system carries information which is not accessible to it directly. Here a special decoding operation is needed. However, it cannot be anything else than *recoding*, the translation of the "alien" code into the "natural" one. After the method of such translation has been found and consolidated, the "alien" code becomes "natural" and the system makes a step forward in its progressive development. The "natural" code as a definite uniformity of its substrate elements, physical properties, etc. is transparent, so to speak, to a given self-organising system both in the sense that its properties and component elements are not differentiated posing as a single whole and revealing at once the embodied information (like, for instance, well-known words of a native tongue), and in the sense that the code organisation need not be reflected at the mental level at all (this is an important circumstance in view of the fact that both the "natural" and "alien" codes may be "external" and "internal" for a given self-organising system[11]).

Brain codes of the *X* type are "natural" ones. The information *A* embodied in them is immediately given to a social individual in the form of phenomena of his subjective reality (his sense images, thoughts, etc.). The structure of the brain neurodynamic code and the presence of this code in general is not reflected in the individual's mind. When a person is thinking about something, he manipulates the information which is given to him in a "pure" form, i.e. he is completely unaware of his own brain processes. As has already been pointed out, such givenness of information in the "pure" form and our ability to manipulate it are cardinal facts of our mental organisation which may be instrumental in interpreting the category of the ideal. However, these cardinal facts which are usually taken for granted by all researchers need themselves to be comprehended and accounted for.

Ic. *How is it possible to account for the fact that phenomena of subjective reality give the social individual information both* *on the objects reflected in them and on such phenomena themselves (which is reflectivity characteristic of consciousness, i.e. reflection of reflection), but do not reflect the vehicle of this information (i.e. do not give the individual any information on his own brain code)?*

The answer to this question is implied in 1.4. If information is invariant in relation to substrate-energy and spatio-temporal properties of its vehicle, i.e. if one and the same set of data (for a given self-organising system) can be represented in different codes, it means that in the overwhelming majority of cases the reflection of the specific properties of the information vehicle is immaterial for the self-organising system in interest. For effective functioning and development the system only needs information as such (information on external objects and situations, on the most probable changes of the environment and methods of interaction with it, on the system's own changes and states, etc.) and, as a rule, does not need information on the information vehicle itself. Indeed, an individual engaged in different forms of social activity hardly requires to know anything about the brain carriers of the information he uses.

Since one and the same kind of information can be represented by different code embodiments as the individual's behavioural act is determined by the semantic and pragmatic parameters of information and not by the specific properties of its vehicle (such properties may be very different), the ability to reflect properties of the information vehicle lay dormant in the course of biological evolution and anthropogenesis. By contrast, the ability to obtain information as such was rapidly developing, the scope of necessary information was growing and information was increasingly used for control and self-improvement purposes.

Consciousness was a product of anthropogenesis and emerged as a new quality. It was an important advance on the animal psyche and arose when man's increasing ability to manipulate information enabled him to establish control over the information process itself and thus opened up unlimited possibilities (in the historical perspective) to expand the scope of information available to him. In the context of our analysis this new quality may be defined as an unlimited capacity for the reproduction of *information on information* (or, to use philosophical terms, "reflection of reflection"). This quality provides a basis for the development of the faculties of abstract thinking, spiritual creativeness, goal setting and volition, personal self-reflection and self-consciousness.

It is only at this level of information control that the individual attains unlimited *freedom* in the sphere of subjective reality (in dreams, thoughts, hopes, imagination, existential reflections, etc.) which inspires him to create the world's greatest values and condemns to wander desolately in the depth of his barren soul or, worse still, to play God's fool or even go stark mad.

Of course, the aforementioned principle of information invariance underlying, as it does, the directionality of the development of self-organising systems should not be mistaken for a denial of any significance to the form of information code—in fact, it is only intended to emphasise that code forms may be *different*. Biological evolution and anthropogenesis select the most advantageous codes on such criteria as energy economy, organisational simplicity in terms of spatio-temporal parameters, etc.

As a result, some codes prove stable throughout the whole history of self-organising systems or over certain, sometimes very lengthy, periods. Such codes include, for instance, the DNA code system, the pulse-frequency code characterising the functioning of the nervous system of animals and man, a definite language as a relatively stable code for a certain community of human beings. To be sure, it does not mean that these code forms have been predestined to be the only possible ones and that they should never change in the future. Theoretically speaking, the existing fundamental biological and social code forms may be replaced by new code formations or relegated to a secondary plan as particulars. The development of terrestrial self-organising systems continues and may lead to new qualitative changes in their codes and, consequently, to qualitatively new modes of activity. It applies primarily to man and social self-organisation.

So far we know only two types of information processes featuring the quality of subjective reality, that is dealing with "pure" information. Both types have emerged under the influence of the principle of invariance of information in relation to the properties of its vehicle and encompass psychic processes of animals and man. As regards the second type of information processes connected with human subjective reality, its specific features have already been considered earlier. The first type may be briefly characterised as follows. The animals have at least sense images and emotional states (i.e. information in the "pure" form) and are capable of manipulating sense images. Most likely, they also have other modalities, including those not inherent in human subjective reality. However, the scope of information available to them and the possibility of manipulating it are chiefly determined by their genetic programme. Animals do not exhibit any appreciable ability to produce information on information and therefore have no capacity for abstract thinking and ambivalent intentions. Unlike the subjective reality of human beings conditioned by constant reflection and *double representation* of any content (in terms of the Self and Other modalities), the subjective reality of animals is free from any ambivalence, nor does the behaviour of animals bespeak the presence of what is known as free will so characteristic of human activity.

As we have already said earlier, we may presume the existence (or emergence in the future) of other types of subjective reality. We could well conjure up a theoretically coherent type of extraterrestrial subjective reality which is capable of imparting to a self-organising system a certain amount of information not only on reflected objects, including information on information which is peculiar to human beings, but also information on the *internal* vehicle of information (its code structure and mechanisms for conversion of information into mental experience). It could be reasonably expected that such a type of subjective reality will be connected to a social self-organisation different from terrestrial civilisation, since the capacity for immediate reflection of the internal information vehicle would be indicative of a qualitatively higher level of self-reflection and self-control of the social individual, i.e. of his capacity for self-improvement (transformation of the axiologico-semantic structure of subjective reality on the basis of a qualitatively higher level of creative activity directed towards the evolvement of spiritual, including new existential, values).

Let us now pass to the second main question of the mind-brain problem. The general answer to this question may be formulated as follows: phenomena of subjective reality control corporeal changes (and material processes in general) in none other capacity than that of information which ensues from propositions 1.6. and 1.4. This solution is opposed to the idealistic, dualistic and physicalistic theories of the ideal which either postulate the primary spiritual substance and declare all being as its "other-being", or posit two substances (spiritual and material) which are capable of interacting, or deny the qualitative specificity of spiritual phenomena regarding the latter as a kind of physical processes.

To give a more specific answer to this question, we shall divide it into several subquestions.

IIa. *How is it possible to account for the "mechanism" of ideal causality? How can phenomena of subjective reality which cannot be coherently ascribed physical properties pose as the cause of corporeal changes?*

Ideal causality and what is known as the "ideal cause"[12] is a kind of informational causality ("informational cause"[13]) which is qualitatively different by its internal mechanism from physical causality. Though information is necessarily embodied in its vehicle possessing certain physical properties, it is not these properties that determine (when we speak of ideal causality) the process and the result of individual bodily changes and their complexes which, so to speak, comprise a person's actions. The carrier of a given piece of information may have *different* physical properties (by virtue of 1.4) which means that the determining factor in the causal chain is information as such, taken in its specific semantic and pragmatic parameters, and not the physical properties of the carrier which are necessarily included in the causal mechanism but do not determine the effect it produces. Ideal causality (and information-related causality in general) is based on the code principle wherefore the physical "support" of the initiation and realisation of a consciously posited bodily change may vary within very broad limits. This, of course, rules out any physical explanation of informational causality.

A given piece of information may only become a factor of ideal causality if it assumes the form of "natural" code, i.e. the *X* type brain code, apart from which phenomena of human subjective reality are inconceivable. Ideal causality is realised through a chain of code transformations determined by semantic, axiological and operational characteristics of the information which is embodied in the *X* type brain code.

If the programme provides for a certain corporeal change, some comparatively simple action (for instance, I want to take a pencil lying in front of me on the table and do so), the chain of code transformations is typically based on a hierarchical principle and is well established in both phylogenesis and ontogenesis (I mean consecutive and parallel activation of low-level code programmes controlling arm and head movements and other bodily changes, as well as energy support code programmes catering for the whole set of necessary changes). I shall not go here into the consideration of more complex cases of ideal causality as my task is confined to the explanation of its internal mechanism in a general form. One of such more complex cases, however, is worth while discussing, if only in brief outline—it is the case of ideal causality in the sphere of subjective reality itself.

IIb. *How is it possible to account for the "effect" of one phenomenon of subjective reality on another phenomenon (when one of them brings about a purposive change of another, e.g. when one thought brings another one in its wake, etc.)? Is it correct to speak of ideal causality in such cases?*

The ability of one thought to produce another is a common fact of our everyday experience. Yet a scientific account of this process involves considerable difficulties in view of the novelty of this problem and lack of tested methods of quantising the continuum of subjective reality in its actual condition, i.e. in the movement of its multidimensional "content". Therefore, when we intend to assess the "effect" of one phenomenon of subjective reality on another phenomenon or to analyse the process whereby one phenomenon generates another phenomenon, we must first establish the criteria for their differentiation. These questions have already been discussed earlier. We may assume, as a first approximation, that phenomena of subjective reality are quantisible in time if they can be distinguished by at least one of the five analytical parameters proposed by me earlier (see Chapter 2, §3).

Proceeding from this assumption, I designate one of the two phenomena A_1 and the other, A_2. Then if A_1 causes A_2, it is equivalent to the code transformation of X_1 into X_2. In my view, this relationship may be regarded as an example of ideal causality. Indeed, the internal mechanism causing A_2 to follow A_1 does not differ in principle from a mechanism whereby a phenomenon of subjective reality causes a definite bodily change.

In both cases we have a code transformation caused, as I have already pointed out, by nothing else than information. The difference primarily consists in the following: in the latter case the most probable methods and "routes" of code transformations are set by the results of biological evolution and morphophysiological new formations of anthropogenesis, whereas in the former case they are determined by assimilated cultural standards. These standards (logical, ethical, artistic and others) set the most probable action patterns in the inner, ideal sphere, the most probable routes of content (semantic) changes in subjective reality (movement from A_1 to A_2), i.e. the X type code transformations. Very illustrative in this respect are logical standards which define rather rigidly the "routes" from A_1 to A_2 at the discursive level of the thinking process.

However, the X type code transformations are the *Ego-structure* of the brain self-organisation, since any separate phenomenon of subjective reality singled out by one or another method from its context belongs to the given unique Self and bears its hallmark. It is one of the moments of integral subjective reality which exists only in a concrete inimitable personal form (as has been explained in detail in Chapter 3, §1). It means that the directionality of the X type code transformations is conditioned also by the given unique Ego-structure, not predetermined in certain respects and depends on personal traits, including such personal parameter as volition. Here we are again confronted with the traditional problem of free will versus determined brain processes. How are we to accomodate these phenomena? This is one of the most difficult issues in the problem of ideal causality.

IIc. *How is it possible to account for the phenomenon of free will and active choice in terms of the informational approach to the mind-brain problem?*

I shall not enter into the analysis of the above-indicated phenomena since for our purpose we need only to acknowledge that in some cases an individual acts of his own accord (in practical matters or at least on the ideal plane) and that in some situations his choice is inwardly motivated. Such actions, including making a choice (an act on an ideal plane), cannot be construed as being only a result of the operation of external factors and need for their explanation an acknowledgement of the real individual's inalienable capacity for responsible behaviour combined with a creative ability.

Freedom of choice is equivalent to an individual's relative independence which reveals itself with particular clarity in the inner, ideal sphere. One can hardly deny the fact that at least in some cases an individual can control the course of his thoughts and manipulate at will certain phenomena of his subjective reality, e.g. images, intentionality vectors (this is not to say that subjective reality has no room for such categories of phenomena which are either completely unamenable to control or yield to it with great difficulty). From the viewpoint of the informational approach, the acknowledgement of the Ego's ability to manipulate phenomena of subjective reality, i.e. information in the "pure" form, has the following implications.

1. If I can manipulate phenomena A_1, A_2, etc., i.e. change A_1 to A_2, etc. of my own free will, it is equivalent to my being able to manipulate their codes X_1, X_2, etc. which are brain neurodynamic systems organised in a definite way. Consequently, *I am capable*, however strange it may seem, *to manipulate of my own accord a certain category of my brain neurodynamic systems, i.e. to control them.** What is more, it means that I am capable not only of manipulating a plurality of my own brain neurodynamic systems, activating and deactivating them in a

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* This conclusion has been flatly rejected by prominent physiologist P. V. Simonov. The ability to control a certain category of brain neurodynamic systems appears to him, as he writes, "completely mysterious".[14] In that case he ought either to deny the obvious fact that every individual is capable in certain situations of controlling the phenomena of his own subjective reality (the course of his thoughts, the change of the perception field, etc.), or to challenge the postulate that every phenomenon of subjective reality is necessarily embodied in its brain neurodynamic equivalent (code). Since Simonov does not dare to do either and, judging by his article, recognises both premises, the reason

definite sequence, but also of determining the directionality of code transformations (within certain limits), and, finally, of creating new code patterns of the *X* type and unique varieties of brain neurodynamic systems.

After all, there is no denying the fact that an individual can bring forth, through a creative effort of his will, novel ideas, unique artistic images, deeply emotional poetic revelations. These new formations in the sphere of his subjective reality have their necessary code embodiment in his brain neurodynamic system. It does not seem likely that the appearance of a new stable formation in the subjective reality of a given individual is not accompanied by the appearance of new formations in the organisation of his brain code. Hence, from this viewpoint subjective reality can be construed as an essentially continuous historical chain of new formations which owe their emergence to the creativeness of the Self.

2. Since the capacity for the evolvement of new formations in the sphere of subjective reality is equivalent to the capacity for the evolvement of new formations on a certain level of the brain neurodynamic system (and, for that matter, for the evolvement of the brain code organisation of the *X* type, since the latter is evidently not confined to the neurodynamic system), we have reason to believe that the individual has a constant *possibility of expanding his capacity* for self-regulation, self-improvement and creative endeavour. This is true, of course, not only of spiritual self-improvement and control of one's own mental processes, but also of the control of bodily processes, the psychosomatic parameters of self-regulation. The basic possibility of transgressing the usual bounds of self-regulation is vouched for by the yogis' meditation practices and the experience of outstanding individuals who have attained fantastic results in the control of their bodily functions (recall, for instance, the remarkable capabilities of the "escapists' king" Harri Houdini which, incidentally, have not received so far any cogent scientific explanation[15]). Reports of individuals capable of slow-

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for his opposition to our conclusion indeed appears "completely mysterious". Simonov's attitude evidently derives from his general methodological stand according to which activeness, self-determination and self-regulation are reducible to external determination and external regulation (ibid.).

ing down their cardiac rhythm, relieving acute pain, etc. clearly testify to the fact that they can shape at will such brain neurodynamic patterns, such chains of code transformations which pave, as it were, a new effector way and extend to the vegetative and other lower regulation levels normally inaccessible to arbitrary, conscious control.

3. The ability of an individual to control his own brain neurodynamic systems inevitably leads one to a conclusion that the X type neurodynamic systems taken in their actual interrelation are self-governing and self-organising components making up the individual's *personal level of the brain self-organisation* (the level of the brain's self-organising Ego-structure or Ego-system). In other words, the conscious Self with all its gnostic, axiological and volitional peculiarities is represented in the operation of the brain neurodynamic systems of the X type as self-organising systems.

Consequently, an act of free will is (from the viewpoint of both the choice being made and the internal goal-oriented effort being exerted) an act of *self-determination.* It invalidates the thesis about the incompatibility of the notions of free will and determination provided the latter is conceived as a unity of external and internal factors (by the internal factor is understood the programme set by the self-organising system). It is precisely this kind of informational causality that brings out the essence of an act of self-determination.

The informational approach to the mind-brain problem appears to be highly instrumental in the investigation of those brain organisation levels which represent our Ego-system—the code embodiment of the individual's integrated subjective reality. The methodological basis of this approach is the principle of self-organisation which has been validated not only by the progress of cybernetics, but also by the development of a large number of biological and social disciplines. This principle permits disclosing the functional unity of the processes of self-reflection and self-control and gives meat to the concept of self-determination. It is of crucial importance for inquiry into the problem of the ideal with its ramifications in natural disciplines and the theory of science.

3. Decoding as a Special Cognitive Task in the Study of Living Nature, the Psyche and Culture

The informational approach demands that the investigator should focus his attention on the code relationship as the central factor of self-organisation. The study of a given, historically conditioned, code relationship provides a clue to what is termed "content", "meaning" and "sense" embodied in the corresponding material formations. Their comprehension is equivalent to the deciphering of the code, and this permits setting the problems of hermeneutics on a solid scientific foundation.

The progress of self-organising systems, from a unicellular organism to human society (or, put more accurately, to the single terrestrial self-organising supersystem incorporating human society as one of its subsystems), consists in the appearance of new code relations and transformation of existing ones. The sum total of code relations in their genetic orderliness constitutes the dynamic structure of a self-organising system. Hence the strategic significance of investigation into the genesis and transformation of codes. The results of such investigations will provide the basis for understanding the history of the terrestrial self-organisation as a single process, enable us to get an insight into its future and, consequently, to project the royal road of man's creative and world-transforming activity.

The first task that confronts an explorer of code relationships consists in identifying a given object as a code, and in its subsequent deciphering. It is a very specific cognitive task essentially different from those that faced classic natural science when it was engaged in the development of explanatory models of the phenomena of inanimate nature. Indeed, code deciphering is pivoted on two basic categories—sense and new historical formation that never bothered the investigators of the classic period.

Let us try to size up this task.

The study of self-organising systems, including man's cognition of himself centres upon the investigation of code relationships. Every self-organising system features a definite, often extremely mixed complex of code relationships indicative of its organisation, functioning and capacity for development. The cognition of a code relationship consists in the deciphering of the code, i.e. revealing the information embodied in certain processes and structures which are either components of the self-organising system or products of its operation and objects of its actions. The "comprehension" arrived at in the process of communication means nothing else than the deciphering of a code.

In this context code deciphering is regarded as a purely cognitive task, though its significance goes far beyond the framework of cognitive processes and any conscious activity in general; code deciphering is a crucial operation indicative of the purposeful functioning and development of any self-organising system conceived as an element of a broader self-governing organisation. Just as a man does not exist outside society, so an animal or a plant does not exist outside the system of like organisms and the ecological system as a whole. This life in a community, constant communication of a given separate self-organising system with its likes and, simultaneously, with other forms of self-organisation is a continuous chain of code transformations—the coding and the decoding of information. It stands to reason that all these objective processes of code transformations may become objects of investigation and cognition. In that case they become involved in the process of human communication and the corresponding codes are deciphered and translated into human language.

Let us now discuss in more detail the problem of code deciphering as a specific cognitive task. For this purpose we need to know the meaning of the notions of decoding (deciphering) and coding in respect of cognitive processes.

The notions of code, coding and decoding originally evolved in cryptography as rather specific terms with narrow meaning. The term code denoted a method of message ciphering aimed at excluding unauthorised persons from the process of communication; coding was understood as the process of ciphering, i.e. translating a message expressed in the common language into a specially devised system of signs making sense only to the initiated; decoding was understood as the reverse process of translating a coded message into the common language. Despite the narrow field of application of the above notions (cryptography), they contained in embryo a number of extremely broad principles and were therefore capable of enormous expansion.

Let us first consider the notion of decoding in the broad sense, that is from the angle of the problem in interest. As has been repeatedly stressed above, information can only exist in a code form. The code is a definite vehicle of given information in a given self-organising system (or in a group of self-organising systems). Since information does not exist outside its material vehicle, it does not exist outside a definite code. Hence, decoding can mean only one thing: the translation of an unknown code into a known one.

In those cases when information is given to us directly, e.g. when we see a snow-covered field, it also exists (in us and for us) in a code form; however, we are not aware of such codes, they are, so to speak, transparent for us and make a part of our own organisation.

I shall call such codes "natural" to distinguish them from "alien", the content of which is not directly accessible to us and is to be "unravelled". The need for deciphering a code arises only when a self-organising system encounters an alien code. Hence, a decoding operation is essentially a conversion of an alien code into a natural one and cannot have any other meaning as information can only exist in a definite code form.

Most code conversions we are constantly engaged in are so closely interwoven with our daily life that we are simply unaware of them—they are the breathing air of our social activity.

The alien codes, after we have found a method of converting them into natural ones, can be assimilated by a self-organising system and transformed into natural codes. Such a transformation signifies the emergence of a new functional subsystem, a kind of a converter, and consequently, a step in the development of the given self-organising system. This is true both of the process of study in general and of any cognitive operation resulting in the "comprehension" of any new idea, in particular. When we grasp somebody's concept which was hitherto inaccessible to us, when we master, for instance, the theory of relativity or some other theory expressed in a specific language of science, in all such cases our brain forms the corresponding functional converting systems, i.e. new natural codes enabling us to grasp, as if immediately, directly, the main content of the corresponding messages (texts, speech signals). A good illustration is learning a foreign language.

In modern science the term "code" is usually omitted with objects that we call natural codes (by virtue of their "transparency"); when a certain message, a set of signals does not call for any mental or practical conversions (performed with the help of special devices and techniques), when the content of such signals can be grasped immediately, they are normally not called codes. Yet the broad conceptual approach to the problem of code relationship outlined above fully justifies such usage, accentuating the specific and, in my view, very topical aspect of our analysis.

For the purpose of this inquiry it is advisable to distinguish between inner and outer natural codes. To be sure, this division is relative and can only be valid within the framework of a concrete investigation of a given self-organising system. As regards an individual as a self-organising system, by inner codes are understood such signals which do not appear in acts of communication with another individual, are hidden from the latter and function only in the given self-organising system and only for it. Communication with another individual presupposes a transformation of the inner code into an outer one. For instance, the inner natural code for a given individual is the brain neurodynamic code of the image-recollection being experienced by him at the moment. The description of this image being given by him in a verbal form is the external natural code.

Man as a complex self-organising system is a unity of many self-organisation levels representing his history as that of a living and social being. This unity is realised in the process of constant communication between different levels of his self-organisation, such as cellular, organic, organismic, personal (the classification is purely tentative). Each self-organisation level is characterised by its own inner and outer natural codes. The examples of such codes cited above pertain to the personal self-organisation level including immanently interpersonal and social relations.

Not only natural, but also alien codes can be inner and outer, though most of them apparently belong to the latter category. At the personal level of self-organisation the inner alien codes are represented for a given individual by obscure and often negative (from the viewpoint of their meaning) subjective experiences and symptoms rooted in the subconscious and somatic spheres. Numerous examples of inner alien codes not convertible into natural ones are provided by psychopathology. Creative mental processes are also connected with the emergence of alien inner codes symbolising surprise, agonising doubt, inception of a new idea running counter to adopted conceptual patterns, etc. Here the inner alien code represents a factor of the individual's communication with himself starting this communication and stimulating heuristic intentions of the Ego.

I have thus specified somewhat the notions of natural and alien codes in respect of cognitive processes. The natural code, both inner and outer, carries, as it were, pure information assumed to be "understandable"; it does not call for any examination of the signal structure, any special analysis of the vehicle of this information. Thus we do not perceive our friend's smile as a multitude of separate facial motions, but grasp its meaning at once as a unitary whole. Therefore, the aim of deciphering a natural code is not to grasp the meaning of the information it carries, but to comprehend its "design", its structural, temporal, physico-chemical, etc. organisation.

By contrast, the deciphering of an alien code is aimed only at disclosing its information content. We may carefully study every minute detail of the "design" of an alien code, and still remain completely ignorant about its content unless we find a certain rule or method of correlating a given design with given information.

Significantly, the division of codes into natural and alien is also relative being valid only with regard to a concrete self-organising system or a class of systems. Since a complex self-organising system consists of subsystems and elements which are also self-organising systems (for instance, an organism and a cell) and have their own independent programmes, this is also true of various self-organisation levels of a given self-organising system. Thus the genetic code is natural for those cellular mechanisms which are responsible for the synthesis of albumin molecules. And though the synthesis of albumin molecules never stops in any of us, the above-indicated code relationship is alien in respect of the mental images of our Selves produced by the brain. Again, the neurodynamic code of the image of a snow-covered field I may be experiencing at the moment is natural to me, but alien to another individual.

The situations involving the manipulation and use of codes in cognitive processes can roughly be divided into three main types: first, one knows the informational meaning of a code, but does not know its design; second, one knows both; third, one knows that he deals with a code, but does not know either its meaning or its design. We may also distinguish a fourth type, rather a common one, which is characteristic of the initial stage of investigation into a code relationship with its indefiniteness: one possesses certain knowledge about the design of a code, but does not know its informational meaning.

It seems appropriate now to take a closer look at the deciphering procedure with due regard for its variants.

The very fact that an investigator sets himself such a task presupposes his ability to identify a code, i.e. to ascertain that the object of his investigation is nothing else than a code dependence. In turn, the ability to identify such an object and discern a corresponding problem situation presupposes the possession by the investigator of a certain knowledge about the class of objects called codes. Generally speaking, the extension of this class can be restricted by the definition of code as a necessary property of self-organising systems, as a form of the existence and functioning of information (meaning the processes of storage, transfer and conversion of data, as well as its use for control purposes).

The most typical code deciphering task met with in the investigation of biological, psychic and social phenomena can be set out as follows: a given object is known to be a code, find out its information content. Very illustrative of such tasks are investigations connected with the deciphering of specially coded secret messages. A more complex task of the same type is the deciphering of ancient texts. Here, as a rule, we are given a definite object of investigation—a system of signs containing certain information. This system of signs representing a specific language or its fragment is subjected to a careful scrutiny by various methods of quantisation with subsequent correlation and recombination of obtained elements in search of a key to the meaning of individual signs (account being taken of their similarities and distinctions). The experience gained in deciphering the Mayan hieroglyphic script (the work has been carried out by Yu. V. Knorozov) shows that the investigator always possesses certain metainformation, i.e. knowledge about the properties of similar languages and language in general, which enables him to restrict considerably the sphere of search, the number of possible combinations of signs and thereby to reveal the most probable methods of classification of available signs. As a result, the investigator gradually defines their properties connected with certain meanings (indicative, for instance, of nouns, animate or inanimate objects, etc.).[16] The deciphering procedure in this case consists essentially in a transition from abstract meanings of signs to their concrete meanings. The most abstract meaning of a sign or a complex of signs (i.e. the code) is nothing else than the metainformation possessed by the investigator as knowledge that the given object is a code, i.e. belongs to the sphere of life or human culture. In other words, the knowledge that a given object carries some information and has a certain meaning (i.e. signifies something and is intended for something) arises when we can relate this object with certainty either to phenomena of human culture, or to biological phenomena.

In most cases relating an object to the sphere of cultural phenomena involves no problems. It is far more difficult to include an object under the head of animate nature and thus identify it as a code since we have no more or less definite criteria of a biological self-organising system, i.e. do not know the exact measure of quantisation which preserves the quality of a living organism. As a result, we may easily fail to identify a code or take for a code its fragment that has no informational significance. Of course, one can cite a lot of examples when it is exceedingly difficult or even impossible to rate one or another object among cultural phenomena. This is a very specific problem which calls for a special analysis and goes beyond the scope of this publication. For the purpose of our investigation it is sufficient to focus attention only on those cases where the object in interest undoubtedly falls under the head of cultural phenomena and can be included in the category of, say, natural languages, works of art, industrial products, etc. Since the taxonomy of cultural phenomena has reached a comparatively high level, there are broad possibilities for ranking the object in interest with ever smaller sets of a given class of cultural phenomena whose meanings are known to us. This is the typical course of code deciphering; the success of the operation is achieved through stage-by-stage expansion of metainformation on the affiliation of a given code object with the ever narrower subsets of codes of a definite class. Not infrequently such progressive restriction of the affiliation of a given code brings us after a few steps to a sufficiently high degree of the understanding of its meaning.

Human culture does not know absolutely original codes. Whatever the form of a code, be it a unique object found by an archaeologist or an intricate cipher invented to keep something secret, it always has analogues which can be identified by the investigator. As a rule, clues to the deciphering of codes are a result of conclusions of analogy often calling for subtle intuition.

On the other hand, there are no absolutely non-redundant codes in human culture. Even the strictest code correspondence known to science cannot completely exclude redundancy if only for the fact that no exhaustive solution to the identity problem has been found as yet. Now, the redundancy of a code has one important implication—it confronts us with the question of the degree of our understanding of the meaning of the code when the latter is considered to be deciphered.

This degree of understanding is determined by the needs and aims of the cognising subject (and, generally speaking, of the self-organising system which performs the decoding operation); in turn, such needs and aims are determined by objective factors expressing the historically concrete level of development of the self-organising system.

The establishment of the meaning of the information contained in a given code consists in the establishment of correspondence between the signs and structures of the code object (its physical, chemical and other properties), on the one hand, and what they mean for the given self-organising system (or a definite class of self-organising systems), on the other hand. The deciphering of a code in this sense may be called a forward task as distinct from a reverse task when we are given certain information, but its concrete vehicle, i.e. the code object is not known; in that case it is necessary to identify this object and then establish correspondence between the information known to us and the properties of its vehicle.

The reverse task is, as a rule, more difficult than the forward one. The reason for it lies in the following. If it has been established that a given object is a code, we may assume a priori that it has only one definite meaning or at least a very limited range of meanings (excessive ambivalence and, consequently, uncertainty are ruled out here by the context of the code organisation of the given self-organising system). The situation is different when we possess certain information and must accurately define its carrier, i.e. identify the code object to be investigated. In this case one and the same set of data may have an unlimited number of concrete carriers (code forms) which follows from the principle of information invariance in relation to physical and, for that matter, any substrate properties of its carrier; as a result, the complexity of the task increases considerably.

To be sure, when we are confronted with a reverse task, we also possess certain metainformation. The most abstract metainformation of this kind is the conviction rooted in our world-view that the information vehicle is sure to exist; if we possess certain information, there must be a material carrier representing its code. In many cases we make, with a considerable degree of confidence, the next step and expand the above-indicated metainformation by restricting the sphere of search for the information vehicle. For instance, if the information in question is given to us in the form of a sense image or an idea, the search for its immediate vehicle may be confined to brain processes.

At this point, however, we should clarify what is meant by "possessing information" whose vehicle is not known. In view of the complexity of the problem and lack of the necessary knowledge of its ramifications the expression lends itself to different interpretations. Generally speaking, "possessing information" means the immediate givenness of certain information to the subject. From the viewpoint of its content and value parameters, it is concrete knowledge in the form of an individual's conscious experience. This experience is reflexive in the sense that the individual is aware of his knowledge of something within a given time interval.

In ordinary cognitive situations no question arises regarding the concrete material vehicle of this kind of knowledge (information), since any knowledge exists in us and for us in the form of a natural code, which is "transparent". Nor does it come up when the object of cognition is the cognitive process itself viewed from the angle of the epistemology or methodology of science. We are only confronted by it, as has already been pointed out, in the context of a specific and largely academic problem of code deciphering viewed from a broad perspective and oriented on the analysis from this angle of any cognitive act in general (since it is accomplished by real individuals and any knowledge starts from my or somebody else's conscious experience before it becomes socially meaningful and acquires extrapersonal forms of objectification).

Possessing information thus means certain knowledge available to a given subject in the form of an actual immediate conscious experience. This knowledge may arise as a result of the individual's own reflection or be imparted to him from outside (while he is reading a book, associating with other people, etc.). Now, in what cases may we say that a subject possesses information but its concrete vehicle, the code, remains unknown to him, and in what sense is it unknown?

Suppose the information available to an individual has been imparted to him from the outside. In this situation we are only concerned with the outer codes used during communication. An individual possesses information he received from his friend; in this case he also knows the code—ordinary audio signals. He knows the code when he learns something while reading a book, grasping the meaning of a jesture or a grimace (though the knowledge of the means of extralinguistic communication is not as authentic as that of the means of linguistic intercourse). Sometimes we grasp the meaning of a fleeting expression of our interlocutor's eyes with a high degree of accuracy, but are unable to account for the mechanism of this comprehension.

The above examples show that the expression "the code remains unknown" may carry at least two different meanings: first, when the information vehicle, that is the means whereby information was passed to us, remains unknown; second, when the information vehicle, i.e. the means whereby we received the information, is generally known but the method whereby the information was passed to us through the agency of these means remains hidden.

The second meaning is connected in the final analysis with the forward task of deciphering the code, since we need here to clarify the code object and to analyse the information coding methods. By contrast, the reverse task under consideration is connected with the first meaning (when the information vehicle is generally unknown or highly hypothetical).

At this point we enter the sphere of mysterious phenomena of the human psyche since all attempts to explain them have so far failed to provide conclusive evidence in support of any definite theory. Nowadays one would hardly call in question the stories of a remarkable insight into other people's intentions, a divination of one's dears' innermost wishes or having a feeling of somebody's gaze fixed on one's back. All such phenomena are undoubtedly connected with the perception of some external signals, but the nature of such signals has not yet been revealed. The telepathy phenomena widely discussed now in scientific circles provide a typical example of a situation where the information vehicle is not known.

The absence of knowledge of the information vehicle may attest not only to the investigator's ignorance of objectively existing information transfer means, for instance, some physical processes, but also to his inability to identify among the multitude of phenomena known to science those of their combinations and links which possess a real code status. This circumstance should be taken into account when analysing the problem situation in interest (information is there, but its carrier, the code, is not known).

In my view, it would be presumptuous to reject the possibility of existence of such kinds of information vehicles which are essentially different (even by their physical properties!) from all code objects known to us at present. History constantly provides convincing testimony to the inadequacy of the basic principles of scientific knowledge which set, explicitly or implicitly, the criteria of the existence of objective phenomena. Making a fetish of these principles has time and time again blindfolded the scientists inducing them for many years to close their eyes on repeatedly observable phenomena and stubbornly declare them nonexistent.

Concluding this brief survey of information transfer situations, I think it worthwhile to underscore that if information has indeed been conveyed and its vehicle remains unknown, we have a specific problem situation; the analysis and description of this situation will make it possible to define, if only approximately, the sphere of affiliation and the method of existence of the information vehicle sought for. Its identification may prove exceedingly difficult, but the adequate description of the concrete problem situation will be at least indicative of the area where the search is to be undertaken. Special importance attaches here to a careful account of the cases of repeated conveyance of information, as well as to the investigation of the communicant (if it is known). Being necessarily connected with its vehicle, information inevitably reveals it in one way or another.

Hence, in spite of the principle of information invariance in relation to its vehicle, the reverse task may be considered soluble in principle, since the concrete act of the communication of self-organising systems is always accomplished on the basis of a limited number of codes (by virtue of the very nature of historical evolution) and also because we may single out the invariants of the code objects which are capable of performing the function of metainformation determining the strategy and tactics of the search.

Now I come to the most important, from our viewpoint, version of the reverse task—the deciphering of the neurodynamic code of the phenomena of consciousness. Such phenomena, as has already been indicated, give us, as it were, pure information since we never deal with its brain neurodynamic carrier. Of course, conscious states are verbally informed to a greater or less degree, such verbalisation representing also the coding of subjective states. At the speech or script level the verbal code is not eliminated for the individual.

However, the verbal code is always embodied in the brain neurodynamic system in one way or another and is in a sense secondary to those brain neurodynamic systems which pose as direct vehicles of information given to the individual in a "pure" form. Besides, the verbal code at the level of the inner speech remains completely within the sphere of the phenomena of subjective reality, i.e. shapes and expresses our thought at a comparatively high level of reflexivity. This layer of subjective reality is undoubtedly also embodied in the brain neurodynamic processes and, consequently, the verbally informed thought has its own neurodynamic vehicle, the brain code. The latter, most probably, differs considerably from the brain neurodynamic codes of those thoughts, those phenomena of subjective reality which have not yet been verbalised.

Over the past few years substantial progress has been made in the Soviet Union in the deciphering of the neurodynamic code of the phenomena of subjective reality. The investigations in this field are based on the achievements in the study of the brain and in adjacent fields and have already yielded appreciable results.[17] It can already be said with certainty that the researchers have succeeded in discovering and describing at least some of the crucial fragments of the object which is the brain neurodynamic code of the phenomena of subjective reality.

Recent years have also witnessed the first and rather impressive steps in the solution of the reverse task, i.e. in the search for a specific carrier of information given us, as it were, immediately in our conscious experiences. Further advance in this direction poses a number of fundamental methodological, world-view and social problems which call for profound investigation. The results of this investigation will largely determine the effectiveness of inquiry into the neurodynamic codes of psychic processes and will undoubtedly exert considerable influence on the purely philosophical and methodological problems.

If the practical deciphering of the neurodynamic code ot mental phenomena becomes a reality, the brain carrier of information (appearing to the individual in the "pure" form as subjective experience) could be converted in such a way as to permit this information to be objectified, so to speak, outside the given individual's mind. As a result, the content of a subjective experience of a given individual could be conveyed to another individual directly, past what is now considered to be the natural ways of communication (for instance, the signals generated in the brain of an individual watching a flying airplane could be picked off and transformed into a corresponding image on a TV screen).

As a matter of fact, such kind of objectification is quite common in communication processes, but it is effected now in the natural way.

It is worth noting in this context that the individual as an element of social self-organisation possesses a "closed" subjective world, i.e. his subjective experiences are not directly accessible to others and can only be revealed of the individual's free will discriminatively (as regards the concrete subjective experiences or parts thereof, the persons to whom they are disclosed, and the degree of frankness of such disclosures). This is, incidentally, one of the manifestations of the individual's relative autonomy in the system of social self-organisation.

The neurodynamic code of the phenomena of subjective reality is deciphered naturally during intercourse (mainly verbal) between individuals. Intercourse is essentially the exchange of information between individuals. The "disclosure" of one's subjective experiences during intercourse or creative activity is an act of volition.* During such disclosure the information embodied in its brain carrier is recoded with the help of a speech system (or by other natural methods) and the corresponding signal is received by another individual. As a result, the latter's brain activates a definite neurodynamic system which generates the corresponding subjective experience (not infrequently very similar in content to the one that belonged to the first individual and was willingly disclosed by him).

Significantly, the understanding of subjective experiences of another individual is also an act of volition. Success in communication depends not only on the "openness" of the individual transmitting a message, but also on the certain "openness" of the one who receives it. Under the conditions of such mutual "openness" the natural brain code of one individual is converted into the natural brain code of the other individual who thereby grasps the meaning of the message. The "design" of the natural code remains completely hidden from both individuals; moreover, it still remains hidden for mankind at large.

The deciphering of the neurodynamic code of psychic phenomena may increase the degree of "openness" of the individual's subjective world (at least a part of it) and thereby lead to essential changes in the communication methods and mechanisms of social self-organisation.

Once recognised, the possibility of deciphering the neurodynamic code of psychic phenomena entails formidable ethical problems and calls for a careful and responsible analysis of all probable consequences. Special measures should be worked out and implemented in order to prevent or neutralise those detrimental to mankind.

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* We leave aside those cases when one individual guesses, as it were, certain subjective experiences of another individual by the expression of the latter's eyes or other external signs, or when the true intentions, aims or thoughts of an individual are "deciphered" by analysing his actions and behaviour. Nor do we consider the case when an individual is coerced into disclosing the content of his subjective reality.

NOTES TO CHAPTER 6

[1] D. I. Dubrovsky, *Information, Consciousness, Brain*, Moscow, 1980, Chapter 4, § 12.

[2] O. K. Tikhomirov, "Theoretical Problems of Inquiry into the Unconscious", *Voprosy psikhologii*, 1981, No. 2, pp. 32-33.

[3] V. N. Myasishchev, "Some Questions of the Theory of Psychotherapy", in: *Voprosy psikhoterapii*, Leningrad, 1972 (in Russian).

[4] C. D. Frith, "Consciousness, Information Processing and Schizophrenia", *British Journal of Psychiatry*, 1979, No. 3.

[5] V. S. Gott, A. D. Ursul, "General Scientific Notions and Their Role in Cognition", *Kommunist*, 1974, No. 9.

[6] V. S. Gott, F. M. Zemlyansky, *The Dialectics of the Development of the Conceptual Form of Thinking*, Moscow, 1981; E. P. Semenyuk, *General Scientific Categories and Approaches in Cognition*, Lvov, 1978; A. D. Ursul, *Philosophy and Integrational and General Scientific Processes*, Moscow, 1981 (all in Russian).

[7] D. I. Dubrovsky, *Information, Consciousness, Brain.*

[8] G. W. F. Hegel, *The Phenomenology of Mind*, translated by J. B. Baillie, Harper & Row Publishers, New York, 1967, p. 354.

[9] See for example: G. Somjen, *Sensory Coding in the Mammalian Nervous System*, Century-Crofts-Meredith, New York, 1972; *Cerebral Correlates of Conscious Experience*. Ed. by P. A. Buser & A. Rougeul-Buser, North-Holland Publishing Co., Amsterdam, 1978.

[10] D. I. Dubrovsky, *Information, Consciousness, Brain*, pp. 130-136.

[11] Idem, "Decoding of Codes (Methodological Aspects of the Problem)", *Voprosy filosofii*, 1979, No. 12.

[12] Ya. F. Askin, *Philosophical Determinism and Scientific Knowledge*, Moscow, 1977, pp. 78-79 (in Russian).

[13] B. S. Ukraintsev, *Self-Organising Systems and Causality*, Moscow, 1972, p. 72 (in Russian).

[14] P. V. Simonov, "Science on the Higher Nervous Activity of Man and the Psychological Problem", *Zhurnal visshei nervnoi deyatelnosti*, 1980, Issue 2, p. 239.

[15] Melor Sturua, "Harri Houdini, the King of Escapists", *Nedelya*, 1973, No. 16.

[16] See: Yu. Knorozov, *The Script of the Mayan Indians*, Moscow, 1963 (in Russian).

See: N. P. Bekhtereva, Yu. L. Gogolitsyn, Yu. D. Kropotov, S. V. Medvedev, *Neurodynamic Mechanisms of Thinking*, Leningrad, 1985 (in Russian).

PART THREE.

THE SOCIO-CULTURAL ASPECT OF THE PROBLEM OF THE IDEAL

Chapter 7.

The Category of the Ideal and the Problem of Social Consciousness

1. Theoretical Difficulties in Defining Social Consciousness through the Category of the Ideal

As has already been repeatedly underscored, the concept of consciousness as an ideal phenomenon is one of the basic tenets of dialectical and historical materialism providing the world-view and methodological guideline in the exploration of both individual and social consciousness. This abstract principle, however, should be and is concretised in different fields of philosophical knowledge. Yet the process of concretisation is by no means a deductive operation; it is a creative investigation guided by the above-indicated principle. In the course of such an investigation this principle often comes into conflict with diverse empirical data, general conclusions, theoretical constructs and, of course, with alternative principles. Its purpose is to demonstrate the methodological and heuristic power of the given principle, its ability to sustain a logically coherent taxonomy of the multitudinous diverse phenomena of consciousness in the conceptual field it creates and thereby to provide a basis for their explanation. Naturally, this kind of concretisation is bound to run up against theoretical difficulties and not infrequently necessitates a search for new logical links in multidimensional and highly complex relations between notions of developing philosophical knowledge.

Similar difficulties also arise when the above-indicated principle is applied to social consciousness. In my opinion, they are largely a result of insufficient penetration into the problem of relationship between social and individual consciousness. Let us try to take a closer look at these difficulties.

Social consciousness is a derivative of social being, it is a reflection of the material conditions and processes of social life.

Being a crucial factor of social life and pervading all its spheres, social consciousness is clearly defined in the context of historical materialism and correlated with social being. The notion of social consciousness is logically counterposed to the notion of social being as the ideal to the material.

This counterposition can only be valid if we adhere to the basic abstract definition of the material and the ideal, namely, if we maintain that the material is objective reality, and the ideal is subjective reality. Any deviation from this fundamental opposition inevitably leads, as has already been pointed out, to numerous contradictions and discrepancies and foils all attempts to construct a coherent conception of the category of the ideal depriving it of specific functions and thereby reducing it to the category of the material.

Hence, the definition of social consciousness as an ideal phenomenon should apparently be construed as a statement that it is subjective reality. However, such a definition gives rise to a number of misunderstandings and even meets with vigorous objections. Firstly, the notion of subjective reality which is quite clear at the level of individual consciousness becomes somewhat blurred at the level of social consciousness, as it is represented here not by individual subjects, but by a class, a social group or society as a whole. Granting them subjective reality in the sense of individual consciousness would be tantamount to the obvious mystification of social consciousness (indeed, we cannot reasonably ascribe sensations, thoughts, volitional intentions to society or a class in the same manner as when we speak of an individual). To be sure, society, a class or a social group can and must be regarded as a subject of a special kind. Such a notion of subject is quite relevant within the framework of a number of investigations into the spiritual activity and social processes as a whole. However, it would hardly be justifiable to create yet another notion of subjective reality on these grounds. It would be rather artificial and, far more important, lose its connection with the *basic concept of subjective reality* thereby becoming irrelevant to the problem in interest.

Secondly, social consciousness is not a sum total of individual minds and cannot, for this reason, be equated to a totality of subjective realities of the multitude of individuals making up society, a class, a social group. Forms of social consciousness have a suprapersonal status and determine to a considerable degree the content of individual consciousness.

However, including social consciousness in the category of the ideal, we are obliged to deny it the status of objective reality, and this is equivalent to an assertion that it comes under the head of subjective reality since no third reality is in existence. Where is the way out then?

Before we make an attempt to find it, it is necessary to take a look at similar difficulties arising in the description of linguistic phenomena and cultural values in terms of the category of the ideal. Such descriptions are typical of Soviet publications. A good example is an article by A. A. Leontyev where the author investigates the problem of the sign on the basis of Ilyenkov's interpretation of the ideal.

Without going into detail of this interesting article, let us take up only those of its propositions which are related to the description of the sign with the help of the category of the ideal. The author defines the linguistic sign as an "ideal object" which is essentially a "converted form of actual links and relationships".[1]

This leaves us in the dark regarding the distinction of an "ideal object" from a material one. If the distinction consists only in that the former is "functional", i.e. represents not itself but something else and substitutes for this something in certain respects, then we must rank with the "ideal objects" all objectively existing products of human activity, as they always have some functional meaning. For instance, a stool is made of wood, but this "natural substance" that has been given a certain form represents not itself, but a definite function, and the stool can also be made not from wood, but from some other substance; besides its main purpose, a stool in a room may be indicative of poverty, its master's tastes, etc. Hence, a stool in this relationship does not differ from a linguistic sign and is always an "ideal object". What objects should we classify in that case as material social objects?

Further the author states that the linguistic sign as an "ideal object" serves for "external expression and fixation of *ideal phenomena*" (ibid., italics mine—*D.D.*). Here the term "ideal" already has a different meaning. Judging by the context, the "ideal phenomenon" approximates to what the author calls the "*ideal content* of the sign" (ibid., p. 121), since he distinguishes two aspects in the linguistic sign ("ideal object"): the material aspect (its "body") and the ideal aspect; the latter "is the ideal 'charge' which is expressed and fixed in this 'body' " (ibid., p. 120). The author also makes this clarification: "The ideal aspect of the sign is not reducible to the subjective idea of the subject about the content of the sign image, nor is it the real materiality, the real properties and characteristics of objects and phenomena which stand behind the sign (quasi-object)" (ibid.). Hence, what is not the "ideal aspect of the sign" in the "subjective idea of the subject" should be assigned to the category of the material. This, if we follow the author's logic, applies to sense images associated with the meaning of the given sign.

Finally, Leontyev takes up such a component of the sign meaning, "subjective content of the sign image", as the "semantic shade of this content" (ibid., p. 124). "Here," he writes, "various distortions are especially common, particularly characteristic is the substitution of a personal meaning for the *objective (ideal) content*" (ibid., italics mine—*D.D.*). It follows from here that personal meaning is not "ideal content" and, consequently, should be called "material content" like everything else that is not included under the head of "objective content".

As is evidenced from the above, each time the author uses the term "ideal" to characterise the linguistic sign ("ideal object", "ideal phenomenon", "ideal aspect of the ideal object", "ideal content of the sign") he deviates from the initial logical contrariety of the categories of the ideal and the material which leads to their diffusion. Understandably, the author sought to bring out, using the above indicated predicates, certain essential properties of the linguistic sign in order to analyse them. However, since the meaning of the term "ideal" has not been consistently correlated with the meaning of the term "material" the author's reasoning strayed away from the right path due to numerous semantic aberrations and he failed to make proper use of the theoretical-explanatory potential of the category of the ideal.

If the author had taken due account of the above indicated logical contrariety, he would not have called the linguistic sign "an ideal object" and would not have used the category of the ideal in his analysis of the processes of manipulation of linguistic

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signs without which spiritual activity as such would not be possible. This, however, would have run counter to the tradition firmly established in Soviet philosophical literature to describe and investigate man's spiritual activity in terms of the category of the ideal. Such descriptions usually abound in logical incongruities.

The above-indicated theoretical difficulties and inconsistencies are chargeable not only to the lack of penetration into the problem of the ideal (and, as a result, to the influence of those interpretations of this category which pass over its fundamental logical dependence on the category of the material), but also to the complexity of the content and the ambivalence of the notions "social consciousness", "conscious activity", "spiritual production", etc. These very broad notions possess, as it were, numerous *logical valencies* which express the multidimensional character of their objective content and set a multitude of possible logical bonds with other notions. A single logical bond, for instance, of the notion of social consciousness with any other notion, be it even a category, can never express all the wealth of its content. Some of its logical valencies remain "idle" as they lie on different planes of the abstraction. It is very important therefore to differentiate the main logical valencies of a particular broad notion which covers the whole range of the phenomena in interest (this is where the main difficulties usually arise). After such a differentiation the investigator should concentrate his attention precisely on those logical valencies (i.e. definite substantive aspects setting definite logical relationships) which meet his conceptual purposes.

Logical incongruities and all kinds of theoretically false constructs in descriptions of social consciousness, spiritual activity and cultural phenomena viewed in terms of the category of the ideal are often referrable to the excessively abstract character of judgements. In such cases the logical valencies of the notion of social consciousness (or spiritual activity) are taken either indiscriminately, or arbitrarily. As a result, we either have an illusion that the notion of the ideal as a predicate of social consciousness engages, so to speak, all logical valencies of the latter notion, or face a theoretical vagueness as it is not clear in what logical relations, in what sense social consciousness is ideal.

In order to overcome theoretical difficulties and eliminate logical contradictions, it is necessary to analyse from the above-indicated angle the interdependence of individual and social consciousness, spiritual and material activity, and carefully consider the social dialectic of the material and the ideal.

2. Interrelation Between Individual and Social Consciousness. Individual Consciousness as a Source of New Formations in the Sphere of Social Consciousness

We shall not consider in detail the definitions of individual and social consciousness and rather focus our attention on the character of their interrelations, mainly with a view to getting a better insight into the specificity of social consciousness, its existence and functions.

Social consciousness is a necessary and specific aspect of social life. It not only reflects changing social being, but also performs the functions of organisation, regulation and creative transformation. Like social being, social consciousness is determined by concrete historical conditions and is a sum total of definite ideas, notions, values, standards of thinking and practical activity.

Without entering into the analysis of the complex structure of social consciousness and its forms, I shall only note here that the phenomena of social consciousness are mainly characterised by their specific *content* and specific *social subject*. It means that their significance and functions in social life reveal themselves in the substance of the ideas, teachings and theories characteristic of a given type of social consciousness, in their social meaning and aims, in the orientation on a definite social group, class, nation and society whose interests and world-view they express.

However, the analysis of social consciousness cannot be confined to the above-indicated aspect, crucial as it may be. Another theoretical aspect in the analysis of social consciousness, particularly important from the viewpoint of the investigation into the problem of the ideal, covers the following questions: How and where do the given phenomena of social consciousness exist? What is the specificity of their ontological status as compared with other social phenomena? What are their modes of existence, their social effects? What are the concrete "mechanisms" of their inception, development and dying out?

To be sure, these two theoretical aspects in the description and analysis of the phenomena of social consciousness are closely interrelated. Nevertheless, they represent different logical "valencies" of the notion of social consciousness and should be somehow distinguished in subsequent discourse. For the purpose of such distinction they will be referred to respectively as the *content* and *mode of existence* of the phenomena of social consciousness.

The differentiation of these aspects is also justifiable in view of their relative logical autonomy. Thus social ideas, standards, views, etc., opposite in terms of content, may have one and the same concrete mechanism of their formation as phenomena of social consciousness and one and the same mode of existence and transformation. For this reason, when investigating the content and social significance of definite social ideas, one can mentally abstract oneself to a greater or lesser extent either from the mechanism of their formation or from the mode of their existence. Besides, the differentiation of the above-indicated aspects of description is highly important in considering the interrelation between individual and social consciousness.

Individual consciousness belongs to an individual who, of course, is unthinkable outside society. According to Afanasyev, "the individual is the ultimate, in a sense, elementary vehicle of the social systemic quality".[2] His consciousness, therefore, is basically social. All abstractions used in the description of individual consciousness are always intended to bring out in one way or another, explicitly or implicitly, its social essence. Indeed, individual consciousness can only arise and develop in intercourse with other people and in the process of their common practical activity.

In the consciousness of every individual the ideas, norms, psychological sets, views, etc. having the status of phenomena of social consciousness necessarily occupy the dominant position. Yet even the peculiar, unique features of individual consciousness are always socially conditioned. "Individual consciousness," write Kelle and Kovalzon, "is the consciousness of an individual combining in each particular case and in a peculiar manner the features common to the consciousness of the given epoch, the particular features connected with the social status of the individual and the individual features determined by his upbringing, abilities and conditions of personal life."[3]

The general and the particular in individual consciousness are essentially nothing else than the interiorised phenomena of social consciousness rooted, as it were, in every individual consciousness in the form of subjective reality. We have here a profound dialectical interrelation and interdependence of the social and the individual represented in the integration of social ideals, norms and values in the structure of individual consciousness. Special investigations show that the personality's ontogenesis consists in the process of socialisation, appropriation by the individual of socially significant spiritual values. At the same time it is a process of individuation—the formation of immanent value structures determining the individual's inner stand, the system of his convictions and general social orientation.[4]

Hence, every individual consciousness is social in the sense that it is shaped and pervaded by social consciousness—otherwise it would be non-existent. The main content of individual consciousness is the content of a definite complex of phenomena of social consciousness. This is not to say, of course, that the content of a given individual consciousness includes all the content of social consciousness and, conversely, that the content of social consciousness includes all the content of a given individual consciousness. The content of social consciousness is extremely diverse and includes both the components common to all mankind (logical, linguistic, mathematical rules, the so-called elementary norms of ethics and justice, generally recognised artistic values, etc.), and the elements characteristic only of a class, nation, trade, etc. It stands to reason that not a single individual consciousness can accommodate such essentially heterogeneous content, the more so as a considerable part of it represents incompatible ideas, views, concepts and values.

At the same time the content of an individual's consciousness may be in some respects richer than that of social consciousness. Individual consciousness may contain new ideas, notions and assessments which have not yet found their way into social consciousness and may even never enter it. Particularly important is the fact that individual consciousness is characterised by a number of psychic states and features which cannot be ascribed to social consciousness.

True, the latter may have certain analogues of such states expressed in definite social conceptions, ideological forms, in the social psychology of certain classes and strata of society. Yet the state of anxiety, for instance, of an individual is essentially different from what is described as a state of anxiety of a broad section of the population.

The properties of social and individual consciousness are not isomorphic. Nonetheless, there exists an obvious similarity between the description of the properties of individual consciousness and that of the properties of social consciousness, since there is no social consciousness outside and apart from the consciousness of a multitude of individuals.[5] The difficulties involved in the correlation of the properties of individual and social consciousness give rise to two opposite tendencies. One consists in attempts to personify a collective subject, i.e. to ascribe to it the properties of an individual subject, a person. The untenability of this approach was convincingly shown by Marx in his critique of Proudhon: "M. Proudhon personifies society; he turns it into a *person-society*—a society which is not by any means a society of persons, since it has its laws apart, which have nothing in common with the persons of which society is composed, and its 'own intelligence', which is not the intelligence of common men, but an intelligence devoid of common sense. M. Proudhon reproaches the economists with not having understood the personality of this collective being"[6]

As we see, Marx takes exception to a description of society which has "*nothing in common with the persons of which society is composed*". He shows that the Proudhonean personification of society leads to its utter depersonification, i.e. to a complete disregard of the personality in society. The "intelligence" of society turns into a kind of separate entity which has nothing in common with the intelligence of its individual members.

The other extreme finds its expression in a conception which is purportedly the reverse of the personification of social consciousness. It takes up where the Proudhonean personification leaves off and tries to pass certain extrapersonal products of spiritual culture for social consciousness, divorcing them from individual consciousness, giving them a life of their own and endowing them with sovereign powers over individual members of society.

I deliberately simplify this conception by pinpointing its essence as it is indicative, in my view, of the rather common line of reasoning that goes back to the philosophical systems of Plato and Hegel. Like the first extreme, it leads to a similar mystification of the social subject and social consciousness (extremes meet!), but, in contrast with the first one, it is based on a number of quite real phenomena reflecting the specificity of spiritual culture. The thing is that the categorial-normative backbone of spiritual culture and, consequently, spiritual activity (taken in any of its modalities—theoretical, ethical, artistic, etc.) is a suprapersonal formation. It is suprapersonal in the sense that it is *preset* for every new individual entering social life and to a considerable extent molds his character. It is also suprapersonal in the sense that it is objectified and its objectification continues in the very organisation of social life, in the activity of social individuals, wherefore a separate individual cannot change or disregard the historically established categorial structures and norms of spiritual and practical activity.

However, this real circumstance should not be absolutised and turned into a dead non-historical abstraction. The suprapersonal should not be construed as absolutely *extrapersonal*, as completely independent of real individuals (present and past). The established patterns of spiritual activity, the recognised norms, etc. pose for me and for my contemporaries as suprapersonal formations shaping our individual consciousness. Yet these formations themselves have been formed by individuals living before us, not by a suprapersonal being.

Further, these suprapersonal formations do not make a rigid, strictly ordered and closed structure which tightly shuts in the individual consciousness and keeps it within the narrow confines of old schemes established once and for all. /On the contrary, it is a flexible and in many respects ambivalent and open system. It gives the individual a broad field of *option* and offers a possibility of creative transformations. It is essentially historical. Yet this historical and, consequently, creative essence is hidden from us and does not shine, as it were, through its rigid framework, if we take it in the "objectified" form as a "ready-made" structure. It reveals itself only in its *active form*, i.e. in the living consciousness of the multitudes of real people, in the dialectical unity of the suprapersonal and the personal.

If we get hold of only one side of this contradictory unity, we are bound to end up in the fetishism of "ready-made", "materialised" knowledge which turns an individual into a slave of the existing stereotypes of thought and practice killing his creative spirit. Knowledge cannot be reduced to the results of cognition. If we may borrow Krymsky's words, it also presupposes a "definite form of possessing these results... This form cannot be anything else than the awareness of the results of cognition."[7] Hence, there is no knowledge outside the consciousness (awareness) of real individuals, and this thesis completely invalidates the "claim to abstract, suprahuman objectivism" (ibid., p. 8) and points to the paramount importance of the socio-cultural and personal aspects of epistemological investigation.

I wholeheartedly subscribe to Batishchev's critique of the fetishism of "materialised" knowledge and oversimplified models of spiritual culture. "It is only by reuniting the objectified forms with the subject's world and including them in the dynamic process, as well as by recovering the multidimensional character of this living process, that we may create the cognitive atmosphere wherein the subject is capable of perceiving true knowledge in its dynamic."[8] If that is not done, the static "ready-made" knowledge (and, we may add, "ready-made" values) stops being a "sublated, subordinate moment of the dynamic process and turns into its master, suppressing the throb of life and devitalising the ferment of creativeness in its fossilised structures" (ibid.).

These passages lay bare the origin of the perilous path leading to the divorce between the structures of social and individual consciousness as a result of which the former turn into an alien coercive force in relation to the latter.

As Penkov correctly notes, "the formation of individual consciousness consists primarily in the assimilation of knowledge contained in social consciousness".[9] Characterising social norms, he describes them as a "unity of three aspects: firstly, they are *elements of social consciousness*, secondly, they are *elements of individual consciousness* and, thirdly, they are a practical *result of the person's correlation* of his "individual rules of life" with the rules and norms reigning in the given society (class, group, collective, etc.)" (ibid., p. 48).

This is how matters stand regarding social norms, most of which are institutionalised as important factors of social consciousness. Their analysis clearly reveals the indissoluble dialectical unity of social and individual consciousness, the suprapersonal and the personal, the objectified and the subjectified, the materialised and the dematerialised. The normative system as a "structural form" of social consciousness "becomes really normative" in so far as it is assimilated by the multitude of individuals.[10] Without such assimilation it cannot be really normative. If it exists only in the objectified, materialised form and does not exist as a value structure of individual consciousness, if it is only something "external" to it, it is not a social norm but a dead text, not a normative system, but merely a system of signs containing certain information. In that case it is no longer a "structural form" of social consciousness, but something entirely alien to it. It may be an old "structural form" of social consciousness, long since dead, whose mummified content acquires meaning only in the light of historical sources.

What may be called a social norm by content is not a "structural form" of social consciousness also in those cases when this content known to people figures in their individual consciousness as "mere knowledge", that is, when it has no value-related intentionality characteristics and motivational status and is devoid, to use Drobnitsky's expression, of the "moment of inducement".[11]

In this context it would be worthwhile to mention a short but very illuminating essay by V. Barulin[12] where the author discloses the dialectic of social and individual consciousness from the angle of the problem of the ideal. He maintains that "the view that social consciousness is external to individual consciousness is untenable in principle" (ibid., p. 14) and that the "phenomenon of consciousness, both social and individual, can only be registered in the sphere of the ideal" (ibid., p. 10). In his opinion, "the objective being of spiritual culture is, so to speak, untrue being, it is only its external form, other-being, not more. Such objects acquire their substance, their true social meaning only when they are reproduced ideally in the perception of a social individual or individuals" (ibid., p. 13). Therefore all that is not "present", not reproduced in individual consciousness, is also absent from social consciousness.[13]

I can only add to these statements that they bring to light yet another important aspect of the problem of the ideal—the "life-time" of an idea in social consciousness and the intensity of this "life" (some ideas are extremely "influential" and grip the minds of the millions; others hardly "smoulder", carry weight with ever smaller number of people and rapidly wane). Ideas can die (when they are not operative in any individual consciousness for a long time and disappear from social consciousness), resurrect, be born anew (recall, for instance, the history of the idea of a steam-engine) and reappear in a new guise after their original version has long since been completely forgotten. These and many other similar phenomena are of considerable interest from the viewpoint of the analysis of the dynamic of social consciousness and inquiry into its historical changes, its variability and content invariance which may survive for many centuries and even remain intact throughout its whole history.

Social consciousness, then, exists only in a dialectical unity with individual consciousness. A sine qua non of the existence and functioning of social consciousness is its representation in the multitude of individual minds. Besides, the investigator must be always aware of the contradictions between individual and social consciousness, as well as of the "activeness" in the attitude of individual consciousness to social consciousness. A. Uledov who has rightly underscored this circumstance[14] has simultaneously pointed out the need to study "individual peculiarities in the process of assimilation of the content of social consciousness" (ibid., p. 309).

The connection between social and individual consciousness is a clear manifestation of the dialectic of the general and the particular; it has been repeatedly stressed by the founders of Marxism who warned against the mystification of the "general" and the "social" (following in the wake of their divorce from the "particular" and the "individual"). According to Marx, if "the *true social bond* . . . of people is their *human* essence, then people realising their *essence* in their practical activity *create*, produce *human social bond*, the social essence, which is not an abstract universal force opposing a separate individual, but the essence of every individual, his own activity, his own life".[15] Lenin, it may be recalled, pointed out that "the materialist sociologist, taking the definite social relations of people as the object of his inquiry, by that very fact also studies the real *individuals* from whose actions these relations are formed".[16]

The "structural form" of social consciousness is not "an abstract universal force opposing a separate individual". I deem it necessary to underscore this proposition once again since Soviet publications are not free from the fetishism of the suprapersonal status of social consciousness which depreciates the role of the individual in the spiritual life of society. In such artificial constructs the living individual, the only creator of ideas and cultural values, the only vehicle of intelligence, conscience, creative spirit and conscious responsibility tends to "evaporate", his abilities and "plenary powers" are alienated and conveyed to one or another "abstract universal force".

Theoretical conceptions unduly contrasting social and individual consciousness and "depersonifying" the processes and forms of the spiritual life of society reveal their untenability from the points of view of both the world outlook and methodology.* They hamper the investigation of social consciousness as a historically established and historically developing system, as they eliminate (or, at best, relegate to a secondary plan) the concrete factors and mechanisms instrumental in *changing* social consciousness.

In my view, this mode of theoretical thinking is routed in undue reverence for Hegel's Logic in which the "abstract universal force" holds undivided sway over a real, living individual. The Absolute Idea, it will be recalled, demonstrates at every step the individual's absolute worthlessness. Hence Hegel's condescending manner, in which he speaks of the individual soul: "Individual souls differ from one another by an infinite number of contingent modifications. Yet this infinity is a kind of bad infinity. An individual's peculiarity, therefore, should not be made too much of."[18]

In this connection T. Oizerman justly observes: "In Hegel the individual is more often than not dissolved in the social. And the degree of this dissolution is interpreted by Hegel as the measure of the individual's greatness. The Marxist understanding of this problem should not be construed by analogy with the Hegelian understanding. The Marxist understanding of the problem consists in the acknowledgement of the unity of the individual and the social. The individual should not be regarded as a second-rate phenomenon, a value of a lower rank, as this leads to a distortion of the Marxist conception of personality."*[19]

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* Discussing the methodological problems of social psychology, A. Dontsov, for instance, justly warns against the "danger of mystifying the 'subjective' properties of the collective, regarding them as a special force different from the own activeness of its members".[17]

Changes of social consciousness are determined, as is known, by changes of social being. Yet the mere reiteration of this fundamental tenet of historical materialism is not sufficient. We must concretise it, show qualitative changes in the spiritual life of society, disclose the workings of the mechanism generating new ideas, new ethical norms, etc. It is here that individual consciousness reveals itself as the sole source of new formations in social consciousness—sole in the sense that there is not a single idea in social consciousness which has not made its *first* appearance in individual consciousness. "Social consciousness is created, developed and enriched by individuals."[22] This crucial statement provides a basis for the analysis of the concrete process of change in the content of social consciousness.

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* Such "dissolution" of the individual in the general, the masses, entails serious negative consequences and meets with well-reasoned objections. Here are two examples. Academician Engelhardt writes: "We are facing a real danger of missing just one, yet, in the final count, the most important thing among the global problems affecting the bulk of the population, even mankind as a whole. What is this 'one thing'? It is a *single* man, a person, an individual. We must always bear him in mind."[20] And here is the opinion of well-known playwright A. Gelman who focuses attention on the questions of the *personal responsibility* of every participant in the process of socialist production and castigates "*group egoism*" as a brake on the country's economic progress. A number of drawbacks in the system of production, planning, supply and accounting persist only because the concrete individuals "who have the power to make changes lack determination and courage, are prone to the ill-famed psychology of group egoism, incapable of implementing the achievements of science—in a word, are morally deficient".[21] This passage underscores the paramount importance of moral factors and personal ethical responsibility. "A thought haunts me that we are not yet sufficiently aware of our responsibility for what happens in the contemporary epoch. It is for this reason that we must take a closer look at the consciousness of an individual... He, and he alone, remains the centre and fountain-head of all changes in the world" (ibid., p. 209).

If one or another idea correctly reflects the impending changes in social being, the tendencies of its development, the economic, political and other interests of a social group, a class, society, if it expresses socially significant values, its originally narrow communicative sphere rapidly expands, the idea acquires more and more new forms of interpersonal objectification, is intensively reproduced, constantly disseminated in social communication systems and gradually wins the minds and hearts of the people. Thus it enters the axiologico-conceptual-activity structures of the individual consciousness of the multitude and becomes the internal, "subjectified" principle of thinking, a guide to action, a normative regulator for a multitude of people making up a given class or any other social community.

Understandably, a crucial role in the formation of an idea as a phenomenon of social consciousness, as well as in its subsequent operation at this level belongs to the sanctioning social mechanisms, various social organisations, institutions, establishments representing the mass communication facilities and exercising control over the content of social information. Depending on the modality of ideas or, more accurately, a system of ideas (political, moral, artistic, scientific, etc.) their content is objectified differently in interpersonal communication systems; different are also the methods of their dissemination, sanctioning and "approval" by various special social bodies. Nor is the activity of these bodies abstractedly-impersonal either; it includes the regulated activity of professionals whose job (depending on the social function they perform) is to reproduce the ideas in different objectified forms, exercise control over their circulation in the communication networks, correct and elaborate their content, devise ways for heightening their efficiency, etc.

In other words, even in the sphere of purely institutionalised activity, i.e. the activity of special state organs, the phenomena of social consciousness originate, take root and get anchored in individual consciousness; this reveals itself with special clarity when the content of the phenomena of social consciousness undergoes some changes—their immediate source is always in individual consciousness.

Changes of content or new formations in social consciousness are always traceable to a definite *author*. They are initiated by concrete individuals or a number of individuals. It is not always that history preserves their names, therefore we use the term "author" in the general sense, as a personal source of an idea, a theory or a cultural value. Not infrequently we know the exact name of the author who contributed a new spiritual value to the fund of social consciousness. This is usually the case with the works of art and science. The personal character of authorship is particularly characteristic of the works of art. A socially significant artistic value is unique in its integrity, any violation of such integrity in the process of reproduction inevitably degrades or even completely spoils the work of art. Co-authorship in this field is rare. The author of a great work of art, whether he is known or not, is typically single.

The situation in science is different. The products of creative scientific activity are not as detached and isolated from other phenomena of culture as works of art. They are not unique as they may be originated by several persons independently of one another, not as integral and inimitable as the works of art since they possess rather strong and numerous external logico-theoretical bonds with other scientific ideas, theories and meta-scientific principles.

When objective conditions in society are ripe for some discovery, it usually lies within the reach of a number of individuals (suffice it to recall, for instance, the history of the theory of relativity anticipated in the works of Lorenz, Poincare and Minkowski). In defiance of the natural sense of justice full authorship is more often than not conferred on the one who expresses the new ideas with greater fullness or clarity than the others. Nevertheless, the absence of the quality of uniqueness in the authorship of scientific discoveries does not mean that they lose their strictly personal character. The same is true of new spiritual values which happen to be a product of joint efforts of several individuals.

The creators of numerous scientific, technical, artistic and other ideas which are not infrequently of paramount importance for social consciousness and, consequently, for social practice are not known and likely to remain anonymous for good. Yet it does not mean, of course, that the corresponding ideas arose outside individual consciousness, in some supernatural way (provided we exclude contacts with extraterrestrial intelligence).

Particularly difficult is the establishment of authorship in the sphere of ethical values and changes in social consciousness brought about by their appearance. Yet even here the investigators find essentially the same concrete "mechanism" of the evolvement of ethical principles, norms and rules. History shows that the emergence of new ethical values and their consolidation in social consciousness starts with the rejection by certain individuals of the dominating ethical norms as failing, in their view, to meet the new conditions of social life, class interests, etc. This process, according to A. Titarenko, is realised "through the violation of already established norms and customs, through actions which were regarded in history, particularly in former times, as immoral".[23]

History abounds in such examples. "The role of the individual in changing the prescriptive content of ethical standards is realised predominantly through the assertion of new patterns of conduct, the accomplishment of acts of a new type, and the adoption of a new mode of activity hitherto unknown."[24] This, as a rule, demands of the individual not only profound convictions, but also courage, boldness, great strength of mind, and not infrequently a readiness to sacrifice his life for new ideals. The "accomplishment of acts of a new type" is followed by wide repercussions and gives an impetus to the development of social self-consciousness. New ethical principles are assimilated first by the advanced sections of the revolutionary class and in time become firmly established in the consciousness of the class as a whole.[25] Bandzeladze notes that creative acts in the sphere of morality are notable for a particularly broad character.[26] *

Analysing the processes of ethical creative activity, O. Krutova writes: "The Leninist methodology makes it possible to construe the *production of morality as a process of selection* of those *elements of individual creative activity* which adequately reflect the interests of a social community... This process results in the emergence of ethical ideas protecting and furthering the interests of the social whole. The signs of the participation in this process of separate individuals are gradually obliterated and the content of morality becomes 'depersonified' " (italics mine—*D.D.*).[27] This description brings out typical features of the emergence of new components of social consciousness as suprapersonal formations.

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* According to Bandzeladze, it would be hardly correct to limit ethical creative activity only to the evolvement of new norms and reassessment of values, denying this status to everyday moral conduct—that would be equivalent to an assertion that creativeness is only characteristic of the work of a composer, and not of a performer of his music (ibid., p. 123).

The movement of the new content from individual consciousness to social consciousness, from the personal form of its existence to the suprapersonal form represents but one, though crucial aspect of spiritual production—its necessarily creative nature. Special importance in its analysis attaches to the dialectical interpenetration of the general and the individual. Indeed, the new elements evolving in individual consciousness cannot be "free" from the logical and value structures, definite principles, ideas and orientations which are immanent in individual consciousness and represent the level of social consciousness. Depending on concrete circumstances, they are capable of performing not only the heuristic, but also the restraining function. The essentially new elements in individual consciousness, both those of great social significance and completely devoid of it, i.e. all sorts of naive, harebrained schemes or mystic projects, inevitably tend to disturb and change these structures.

It is necessary to bear in mind the complexity of the logicocategorial and axiologico-conceptual structures of social consciousness. Linear orderliness is alien to them, they include both hierarchical and one-level relationships based on the principles of subordination and coordination and are sometimes mutually exclusive. The heterogeneous character of the content of social consciousness reveals itself in the correlation of universal human, class, national and group structures[28] which are "accommodated" in individual consciousness. What is more, individual consciousness is free from the rigid demarcations of these structures characteristic of the socially objectified and codified forms of the content of social consciousness.

This is where individual consciousness reveals the measure of its relative freedom determined by historical conditions, as well as its eternal restlessness and creative urge—any objectification, any result is for it but an intermediate product as it only knows the process of attainment, but not the result, the attained.

This creative intention is a crucial feature of the ideal. It represents a constant tendency to overstep the limits of existing objective reality and get into the realm of the possible, the desirable, the better, the blessed—*the aspiration for an ideal.*

The reconstruction of a complex multistage process of the evolvement of new elements of social consciousness (ideological, scientific-theoretical, etc.) calls for laborious historical investigation the results of which often remain problematic. E. Tarle wrote: "There is hardly anything more difficult for a historian of a well-known ideological movement than a search for and identification of its origin. He has to explain how the idea was born in individual consciousness, how it understood itself, how it passed to other people, the first neophites, how it was gradually changing..."[29] Correct answers to these questions can only be given, in his opinion, if the historian follows the path indicated by the sources. Considerable interest in such an investigation attaches to the factors (socio-economic, ideological, psychological, and others) which assisted or militated against the above-indicated process, to those collisions, conflicts of opposite views and interests which so often mark it.[30] The investigation of such conflicts usually opens up yet another aspect of the problem—the need to find out the true aims, motives and intentions of the historical person in interest irrespective of what he wrote or said about himself.*

The dialectic of the individual and the general, the personal and the suprapersonal is crucial to the concept of the dynamic structure of man's cognitive activity. The issues related to it received extensive coverage in Soviet publications devoted to the research into the problematic of scientific cognition (works by B. Gryasnov, A. Zotov, V. Kostyuk, S. Krymsky, V. Lektorsky, A. Rakitov, G. Ruzavin, V. Stepin, V. Shviryov, V. Shtoff, M. Yaroshevsky and others). An important feature of this research was a sustained Marxist critique of the post-positivist conceptions of the development of scientific knowledge. Partic-

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* Such kind of "historical hermeneutics" is excellently exemplified by Tarle's own book about Talleyrand[31] where the author exposes Talleyrand's true objectives versus their social camouflage and reveals paradoxical combinations of base motives, passions, selfish interests with socially significant aims and actions.

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Leaving aside the theoretical contradictions in Popper's views disclosed not only by the Marxist critique, but also by a number of Western philosophers,* I deem it necessary to stress here just one point of principle. Karl Popper absolutises the moments of the general, suprapersonal, "established" in human knowledge. As N. Yulina justly observes, he actually denies the "creative spontaneous essence of human consciousness". "It turns out that new ideas making up the aggregate content of culture are not created by concrete historical individuals with their own peculiar features, but culture creates individual consciousness."[34]

The untenability of the Popperian operation of divorcing logical norms and standards from "the real activity of man in the real world" has been convincingly shown by Yaroshevsky whose concept of science based on a sustained analysis of the objective-logical, socio-communicative and personal-psychological aspects of scientific progress is of special importance for our investigation.[35] It is precisely in this conceptual context that Yaroshevsky investigates the dialectic of the personal and the suprapersonal, the role of the categorial structures of thinking and creative activity of a scientist. In his analysis the author rates all these categorial structures (representing a crucial element of social consciousness) under the head of "the supraconscious" because a scientist is often unaware of them and also because they are set for him by the existing culture. Yet their givenness is not equivalent to inviolability. An individual scientist engaged in creative activity is capable of altering these structures in one way or another, sometimes without clearly realising the changes he introduces. "The more radical the changes he makes in the categorial structure, the greater is his personal contribution."[36] "It would be utterly wrong to conceive the supraconscious as being outside consciousness. On the contrary, it is interwoven with its inner fabric and is inseparable from it. The supraconscious is not suprapersonal. It is the supraconscious which enables the individual to attain his highest fulfilment and ensures, after his individual consciousness wanes, the immortality of his creative genius" (ibid.). Changing the categorial structures, an individual makes his contribution to the fund of social consciousness which will live on and develop after his death (this is, incidentally, one of the meanings of the "suprapersonal"). However, social consciousness lives on after the death of any concrete individual and continues developing not only in the objectified forms of culture, but also in the consciousness of the living individuals.*

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* One of the first philosophers in the West who came out with a substantive critique of Popper's conception was Michael Polanyi. He holds that objective knowledge can exist in the personal form and that personal factors cannot be completely removed from objective knowledge. In this connection the author analyses the notions of the personal and the subjective, the extrapersonal and the objective and convincingly shows that "world$_3$" is neither autonomous, nor objective in Popper's own sense.[32] Among latest critical works mention should be made of H. Brunkhorst's book specially devoted to the analysis of the conception of "knowledge without subject".[33]

In summary, I have tried to show the indissoluble bonds of social and individual consciousness focusing on the critical analysis of those conceptual principles which lead to their undue counterposition. Such counterposition serves as a basis for absolutisation of the "social", "suprapersonal" at the expense of the living, creating individual who is either completely left out of account or reduced to an instrument or function of the "converted forms", a poor puppet of the "material world" completely devoid of a human being's originality, creative activeness and independent value.

3. In What Sense Is Social Consciousness Ideal?

In order to answer this question it is necessary to elaborate a little the idea expressed earlier about the need to differentiate the descriptions of the phenomena of social consciousness by their *content*, on the one hand, and by *the mode of their existence*, on the other, since they focus on different logical valencies of the notion of "social consciousness". In most investigations these two aspects are not distinguished; often the first aspect (content) predominates to such an extent that it completely overwhelms the second one. That is usually accounted for by the aims of the investigation, the need to focus on the social role of the phenomena of social consciousness, their group or class functions, etc. In solving such tasks the "mode of existence" may remain, so to speak, in the shadow and need not be put in the limelight.

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* An interesting analysis of the relationship between the personal and the suprapersonal in the processes of scientific cognition has been ventured of late by L. Motorina.[37]

Yet for our purpose this aspect becomes central, since the definition of social consciousness as an ideal phenomenon refers to any component of social consciousness. To be sure, each of them has its own specific content and specific functions, but at this stage we are mainly interested in a property that is common to all of them. For this reason we may abstract ourselves temporarily (and only for the sake of clarity of our discourse) of their concrete content. In our subsequent analysis both the content and existential descriptions of the phenomena of social consciousness will figure prominently as important correlates enabling us to get a better insight into the problem under investigation.

What has been referred to, for brevity's sake, as description of the phenomena of social consciousness by content implies, alongside a description of its *content* (semantic) parameter proper also a description of the other basic parameters, namely, the *form* (structural) parameter, the *verity* parameter reflecting, adequately or otherwise, the social being, the *value* parameter indicative of the corporate interests reflected in a given phenomenon of social consciousness (and, consequently, of the premise for selection of good or bad, the desirable or undesirable), and the *operational-effective* parameter characterising the phenomena of social consciousness from the viewpoint of their directionality, goal-orientation and activeness. I do not deem it necessary to elaborate on each of these parameters, as they are very similar to those of subjective reality (see Chapter 2, §3).

Now I make two clarifications. First, for the sake of convenience I shall use the expression "description by content" or "content description" to denote all the above-mentioned five parameters of the phenomena of social consciousness in the aggregate. Second, special account should be taken of those cases of content description which deal with the logical structures of thinking, value structures, general rules of certain procedures, mathematical constructs, etc. The thing is that in many pletely overwhelms the second one. That is usually accounted for by the aims of the investigation, the need to focus on the social role of the phenomena of social consciousness, their group or class functions, etc. In solving such tasks the "mode of existence" may remain, so to speak, in the shadow and need not be put in the limelight.

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Yet even in this case there is a possibility of and a need for two types of description: first, when we speak about the specificity of a given form (structure), clarify its affiliation to a certain class of forms (for instance, logical, axiological, operational), indicate its functions in the processes of spiritual production, etc., i.e. when we are concerned with a description by content; second, when we are interested in the mode of the existence of a given form and focus on such questions as how, where and in what a given form is embodied, i.e. when we deal with a description by the mode of existence (for instance, a logical form can exist in individual consciousness as a form of one's thought and can also be embodied in a computer programme, i.e. exist and function apart from individual consciousness as something alien to it, in a system of automatic technological processes, in "finished" structures, etc.).

Here we come to one of the key issues of the problem of the ideal. Every "content" of social consciousness can exist in a form alienated from individual consciousness. This content is expressed quite adequately in different forms of suprapersonal objectification—in texts, paintings, engineering designs, operating machinery, industrial products, stable social relations, i.e. in various procedural and structural forms of material culture.

However, it is by no means every content of individual consciousness that can find an equally adequate expression in the above-indicated forms of objectification. Take, for instance, such components of the content of individual consciousness as a feeling of pain, passing sensuous-emotional states experienced by a given individual, and many other phenomena which do not lend themselves to an explicit verbal account, not to speak of integral fragments of the "immediate present" (scraps of images, ideas, vague allurements, premonitions and dreams characterised by emotional ambivalence and indeterminacy of intentions).

To be sure, a great artist is capable of sensing such mental states and expressing them in word or music. Yet even all the masterpieces of world art put together are pathetically inadequate to convey what was going on in billions of individual souls in the past and what is going on in them now. This is true not only of the content of individual consciousness which has no apparent social significance and is transient for the individual himself, but also of the content of great social value which is not yet identified as such and remains alien to the arts, let alone science. The reason for it may lie in its immaturity, "fluidity" and elusiveness, the lack of penetration into its true meaning, the absence of adequate means for its suprapersonal objectification, etc.

There is always something in the content of individual consciousness which cannot be fully objectified in the extra-personal forms of culture in general or does not lend itself to objectification under given historical conditions, i.e. something *inalienable from the living individual* and existing only in the form of his subjective reality. This is precisely the reason why individual consciousness is more complex than social consciousness. The content of the latter is more analytical, orderly, stable than the largely syncretic and dynamic content of individual consciousness and is generally characterised by a high degree of objectification in the contemporary forms of culture.

Individual consciousness actually exists as the subjective reality of a given individual, and this quality cannot be alienated (now and in the preseeable future) from the living individual, cannot exist in the objectified form in principle. It only exists *in the process of objectification* (and, of course, deobjectification), but the thought of a given man, *already objectified* and presented in the object form is objective and not subjective reality. In a "finished" object, e.g. a manuscript, we have certain estranged and "solidified" content of subjective reality, but we have no subjective reality as such, no quality of the ideal.

As has already been pointed out, there is no phenomenon of social consciousness (an ideology, a system of views or just a "structural form" of thinking, a "pattern" of activity) which does not exist in a certain plurality of individual minds. To put it more accurately, a definite "content" of social consciousness is always an essential part, or, better still, a nucleus of a plurality of individual minds (in order to define this plurality, it is necessary to take a concrete content of social consciousness and consider its carrier, a concrete social group; such a group comprises a definite plurality of individuals, each having *his own* consciousness representing, however, to a greater or lesser extent the corresponding content of social consciousness).

V. Tugarinov has rightly pointed out that "individual mind accommodates consciousness in general and social consciousness".[36] This statement underscores a simple, but very important proposition that consciousness always and everywhere exists only as the consciousness of living individuals, socially united, making up labour collectives, political parties, classes, nations, humanity at large. Therefore social consciousness exists only as a "*living*" dynamic phenomenon performing the functions of guidance, organisation, consolidation, regulation, etc. in the activity, communication and life of large groups of people. That means that the content of social consciousness exists only in the form of the subjective reality of a multitude of people and constitutes the nucleus of the content of a multitude of individual minds. It is precisely in this sense that social consciousness is ideal. If we lose sight of this basic qualification and regard social consciousness as ideal in general, we break with the original definition of the ideal as subjective reality and run up against difficulties in trying to sustain a coherent account of consciousness in line with the basic principles of dialectical and historical materialism.

The category of the ideal characterises not the content of social consciousness as such, but a definite mode of its existence, outside which social consciousness loses its necessary features and turns into a collection of products of spiritual activity which, if they are not "consumed" and deobjectified by anybody, constitute a dead capital of social information. The monuments of material culture created by past generations include a lot of "forgotten" objects (e.g. texts) buried under the layers of subsequent centuries or recovered but not "deciphered" whose content has not yet become the property of individual consciousness. If this "content" is sufficiently original, it is not incorporated in the conceptual fund of present social consciousness. Not all that is stored in culture belongs to operative social consciousness. It is therefore important to distinguish between the notions of culture and social consciousness.[39]

To be sure, the "living" social consciousness, i.e. the active consciousness of a multitude of individuals cannot be divorced from its historical socio-material foundation. "Living" social consciousness exists and realises its content in the communication and activity of a multitude of social individuals. This content is constantly estranged in the products of their activity and constantly reproduced in the consciousness of individuals by these objectively existing products of activity and by the entire objective system of social relations.

For this reason "living" social consciousness is indissolubly connected with "social memory". According to J. Rebane, "social memory may be characterised as information accumulated in the course of socio-historical development, fixed in the results of practical and cognitive activity and passed on from one generation to another with the help of socio-cultural means".[40] The author rightly underscores that "information depends not only on the system in which it is fixed, but also on the system where it is received and processed. In society, this central system is represented by real, living individuals. There are also such carriers of social memory which, though constantly manifesting their influence through man and his activity, exist apart from individual consciousness as something relatively independent. These include, firstly, implements of production and materialised results of labour, the sum total of objectified activity covered by the broad notion of 'material culture'; secondly, language in all its manifestations, as well as non-linguistic semeiotic systems; thirdly, the system of objective social relations that has evolved on the basis of production activity and is given to people as external social reality."[41]

Hence, social consciousness viewed on the side of its "content" is recorded in "social memory" as the necessary condition of its "living" being in the multitude of individual minds. Living social consciousness possessing the quality of ideality constantly alienates its content in new and old object, material forms, constantly "leaves" itself in them and again draws its content from them only to reembody it in the same or altered forms of material culture. This eternal metamorphosis from subjectivised content into independent social objects or processes, the transformation of the ideal into the material and vice versa does not invalidate the proposition that the quality of ideality is inherent only in "living" active social consciousness which exists in the heads of the multitude of individuals and manifests itself only through their consciousness. The greater the number of individual minds where a definite content of social consciousness has taken root, the higher the social significance and effectuality of this content.

Owing to its profound penetration into the nature of ideology as a specific phenomenon of social consciousness, Marxism disclosed the mechanism of its emergence and development and revealed its social functions. Ideas become a material force when they grip the minds of the masses. This Marxist proposition clearly expresses the active social role of ideology.

What is the objective of struggle for the minds of the masses? When do ideas really *capture* the masses? It happens only when they turn into inner convictions and value guidelines for the masses, into principles and norms of their behaviour, when they become a guide to action, reflection and solution of social problems. In other words, it happens only when a definite "content" of social consciousness gets incorporated in the value-and-meaning structure of subjective reality of the multitude, when it becomes the essential, pivotal component of this subjective reality. This crucial transformation provides yet another proof of the dialectical essence of the category of the ideal which is logically counterposed to the category of the material but is inseparable from it and preserves its specific meaning only within the bounds of this antithesis.

4. The Ideal, an Idea, Idealisation, an Ideal

We have so far discussed the category of the ideal from the viewpoint of its relation to social consciousness. One should bear in mind, however, that the category of the ideal itself is a phenomenon of social consciousness (like any other philosophical category). Viewed from this angle, i.e. as a phenomenon of social consciousness, the category of the ideal clearly reveals the unity of its basic dimensions—ontological, epistemological, axiological and praxiological. None of these dimensions can be completely reduced to the others, yet each of them implies the others and is concretised through them. This is characteristic of all basic philosophical notions expressing the specificity of philosophy as a form of social consciousness.

Revealing its content within this four-dimensional system of coordinates, the category of the ideal brings out the actuality of consciousness and the specific mode of its existence, the determinacy of consciousness as knowledge, reflection of reality, as a value relationship and, finally, as the creative activeness of consciousness. This exposition, of course, does not affect the logical contrariety of the categories of the ideal and the material. However, the materialists and the idealists give opposite interpretations of this contrariety.

As is known, the first explicit formulation of the problem of the ideal is credited to Plato. The problems posed in the philosophical system of the great ancient thinker pivoted on the antithesis of the general determinations of being. The spiritual and the material, the eternal and the transient, one and many, the absolute and the relative, essence and appearance, the general and the individual, chance and necessity, the actual and the proper, the creator and the created, the perfect and the non-perfect, etc.—these are the opposites which make up the categorial framework of philosophical thought and at the same time constitute the inner source of its development.

Plato gave a consistent solution to the basic question of philosophy from the viewpoint of objective idealism and unified accordingly all principal determinations of being on the basis of the category of the ideal. The eternal, the one, the absolute, the necessary, the universal, the perfect and the creative are posited in his conception exclusively as the ideal, in contrast with the material which is only the sphere of the transient, the individual, the accidental, etc. Hence the "universalism" of Plato who treats with contempt the sensuous, the empirical, the individual as patently inferior and not genuine. If we may borrow Oizerman's summary, "in Plato's teaching disdain towards individual things and materiality in general was exalted as an unconditional prerequisite for true philosophistics."[42]

The ideal, according to Plato, is a common property of the world of ideas which exist in reality as "patterns fixed in nature".[43] They have the status of "true being" (ibid., p. 408) and "each idea may be one and the same in all" (ibid., p. 319).

As we see, the ideal in Plato not only determines the material, but combines in itself the properties of being absolutely universal and absolutely valuable. It is *primary* in the ontological sense, epistemological sense (as logical, theoretical relative to sensuous, empirical), axiological sense (as ideal, proper and perfect relative to material, actual) and praxiological sense (as the active, creative cause determining corporeal, material formations and alterations).

There is no denying the fact that the integrity of Plato's philosophical doctrine has considerable appeal. However, the apparent harmony of his system is due to the principle of abstract identity and achieved through oversimplification of the key issues, i.e. through non-dialectical elimination of fundamental antitheses. Highly illustrative, for instance, is the hypostatisation of the universal which in Plato "stifles" the individual depriving it of any value and originality.* Yet such "unification" of being is a gross oversimplification, let alone the fact that the denial of the relative independence of the individual immediately calls in question the soundness of the correlated category of the universal. "Philosophy is indeed oriented on the universal," writes Oizerman. "Yet the individual is also universal and inherent as an attribute in all that exists precisely in its capacity of the individual. Hence, the universal is predictable not only of identity, but also of difference."[45]

From the viewpoint of dialectical materialism it is utterly wrong to conceive the ideal as exclusively universal and, even more so, to define the universal as exclusively ideal. In like manner it would be a mistake to affirm, following Plato, that the ideal is always the *absolute*: absolute identity, absolute accuracy, absolute perfection, absolute good, absolute purpose, an ideal. The ideal is broader than what is meant by the absolute and by an ideal. Here Plato has indeed put his finger on a vital point.

The category of the ideal preserving its logical contrariety and dialectical connection with the category of the material expresses, alongside the relative, also the moment of the absolute

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* The same is true to other consistent objective idealists. N. Styazhkin, discussing the problem of the universals in medieval philosophy, draws an interesting parallel between the views of Thomas Aquinas and Hegel.[44]

(in the ontological, epistemological, axiological and praxiological senses). Yet the ideal as the absolute, as an ideal, is a result of concrete historical conditions and can only be comprehended through the relative. The "absolutely absolute" simply does not exist for us, there are no absolutely extratemporal, extrahistorical entities. This important aspect of the problem of the ideal which has already been touched upon earlier deserves special consideration.

It should be noted that Plato's statement of the problem of the ideal has left an indelible imprint on the entire course of its subsequent investigation (which is, of course, largely attributable to its "rational kernels" which we cannot discuss for space considerations). The very term "the ideal" in its philosophical sense comes from Plato's ontology and is derivative from the "idea". This terminological aspect of the problem is by no means unimportant for the understanding of its essence. It is indicative not only of Plato's formulation of the problem of the ideal, but of his *solution* to this problem. The ideal in Plato is confined to the world of ideas, to the *concept of idea*. Yet even if we take only the rational core of this notion, the sphere of the category of the ideal will be unwarrantably restricted just the same.

The concept of the idea is an important category in dialectical materialism, though its interpretation in Soviet publications is sometimes ambivalent. Its investigation has been undertaken by P. Kopnin[46] who, proceeding from a historico-philosophical analysis and works of the classics of Marxism-Leninism, regarded the idea as the foundation of a scientific theory and the highest form of man's theoretical mastery over reality performing axiological and praxiological functions and expressing the aims, intentions and convictions of a social subject. A detailed discussion of the specificity of the category of the idea has also been carried out by a group of philosophers in the Kazakh Republic.[47]

The idea can be defined as a fundamental principle or a profound and original thought (theoretical, artistic, etc.) possessing a great systematising, heuristic and motivational potential, as well as a high social value. Arising in individual consciousness, the idea becomes a phenomenon of social consciousness. It stands to reason that every idea as a living thought is ideal, yet far from everything that is ideal is an idea. The

Platonic tradition in the interpretation of the term "the ideal" is patently inadequate.

The term "the ideal" is very common in Marxist philosophy, yet its original and, one might say, literal meaning is very different from the content of the notion of the ideal (like in the case of "atom" or "ovation" in its contemporary meaning; this latter word comes from Latin "ovis" or sheep which was sacrificed to Jupiter during a "small triumph" granted by the Roman Senate to a legate or a consul for a victory over enemies as distinct from a "big triumph" which consisted in the sacrifice of an ox).

Let us now briefly consider the case, really important for the problem in interest, when the category of the ideal brings out the moment of the absolute, the perfect. Here, with a certain degree of conventionality, we can distinguish two areas, one dominated by logico-epistemological and ontological questions, and the other, by axiological and praxiological questions. Central to the first area is the process of idealisation, the investigation of its epistemological functions and the ontological meaning of the so-called ideal (idealised) objects. Since these questions have been given extensive coverage in relevant Soviet literature,[48] we shall only touch upon them in brief, accentuating the moments important for the understanding of the category of the ideal.

The term "idealisation" is usually used to denote both the ideal objects themselves, and the process of their mental construction, i.e. the formation of a special kind of abstractions such as, for instance, "perfectly rigid body", "ideal gas", "point", "straight line", etc. It is understood that there are no such objects in reality though they serve for its theoretical description and explanation. This is how Engels describes Sadi Carno's ideal steam-engine "which it is true is as little capable of being realised as, for instance, a geometrical line or surface, but in its way performs the same service as these mathematical abstractions: it presents the process in a pure, independent, and unadulterated form".[49]

The process of idealisation, formation of an ideal object presupposes, after the class of phenomena in interest has been selected, a kind of transcendence which consists in "overstepping certain objectively existing bounds or limiting characteristics singled out in given objects, situations or processes".[50] Hence, phenomena are presented in a "pure", "maximal", "perfect", absolutised form, i.e. as an object of theoretical knowledge. Such transcendence is central to the problem of the relationship between the empirical and the theoretical in scientific cognition.[51] The formation of ideal objects represents the active side of cognition and is characteristic of its most developed forms which underlie the possibility of a theoretical solution to the problem in interest. The progress in scientific cognition is therefore "contingent upon the progress in the means of idealisation"[52]; the development of mathematics, physics and cybernetics affords a particularly eloquent testimony to the truth of this statement.

It is worth noting that the process of idealisation and its result do not differ in principle from the formation of any general concept. In this respect, according to A. Zotov, it is difficult to draw a line of demarcation between such objects as a mathematical point and a tree. The moment of absolutisation and "purification", i.e. elimination of everything accidental, variegated and complex, is inherent in every product of abstraction. It is only in this way that objective (and subjective) reality can be quantised at the level of scientific cognition, i.e. formation of its objects. According to Zotov, "idealisation is not just a mental construction of objects which cannot be produced in material reality. Rather, it is a transformation in consciousness of a certain number of features and characteristics of an object into a special object for mental analysis".[53]

Hence, idealisation consists in the selection, formation and positing of an object of scientific cognition at the highest logico-theoretical level. It stands to reason that idealisation can only be carried out by a cognising subject and takes place in subjective reality. Owing to the fact that the result of idealisation is usually fixed in a sign form, it becomes available to the scientists and may acquire the status of a phenomenon of social consciousness which presupposes the deobjectification of a given sign form and subjectification of its content).

Consequently, an ideal object cannot be defined through the category of the ideal only because of its content, i.e. due to the fact that it is dominated by the moment of absolutisation, elevation of some of its empirically registered properties to a level of perfection, or even elimination of any traceable bonds with some empirically known reality. The essence of the category of the ideal is "being subjective reality" and not "being absolute, perfect, necessary-universal, etc.", though the latter meaning as has already been pointed out explicates one of the moments of the content of the category of the ideal. Indeed, the absolute in the pure form (absolutely universal, absolutely necessary, absolutely perfect, etc.) can only exist in subjective reality. It can be "singled out", "isolated" only in consciousness, in thinking, i.e. ideally, and then fixed in a sign or any other material form, but again only *for* consciousness, thinking—because this form loses its quality of "being an ideal object" and degrades to simple materiality unless it is deobjectified and its content represented in living thought.

Now, we may be faced with a different question: *what* does this "absolute" singled out by thought and existing only in thought actually reflect in objective reality and *why* do people need it in their social activity? In order to answer it we should approach the problem of the ideal from a different angle and concern ourselves with its second aspect—the ontological dimension of the ideal object (or, for that matter, any product of idealisation in general), its axiological and goal-setting function.

The ideal, so to speak, representatives of ideal objects are mathematical constructs which have provided a suitable refuge for philosophical idealism ever since the time of the Pythagoreans and Plato. The nature of mathematical constructs has always posed a problem to philosophers and not infrequently been a stumbling-block in the materialist interpretation of the ideal. It is worthwhile, therefore, to try to tackle it, if only in general outline.

According to N. Bourbaki, the main mathematical objects are numbers, quantities and figures.[84] Pointing out that "these objects are given to us and it is not in our power to ascribe arbitrary properties to them" (ibid.), Bourbaki cite Charles Hermite: "I think that they exist outside us with the same necessity as the objects of objective reality and we meet or discover and study them in the same way as the physicists, chemists or zoologists" (ibid.).

The above statements, however, do not throw light on the main point: in what sense are mathematical constructs *objective*? If their objectivity consists in that they are given to us, so to speak, from the outside and cannot be ascribed any arbitrary features as products of creative thought expressed in a clear sign form and recognised by the scientific community, these statements are mere platitudes. Indeed, this is also the case with any fixed phenomena of social consciousness, any spiritual value. Pasternak's verse "August" or, say, Bach's B minor Mass are also given to us *from without* and absolutely forbid any arbitrary alterations. Nor will such statements be in any way better if by objectivity is meant the embodiment of mathematical structures in the sign form, their representation in them and the objective existence of these "representatives" in the form of signs or codes (e.g. in books, in computer memory and operation). Significantly, owing to the extremely abstract form of the mathematical object and almost complete absence of any connection with empirical properties, it can be easily represented and even replaced, as it were, by a graphic symbol. This fusion of the symbol and its meaning is mainly accountable for by the unidimensional character of the code (maximum simplicity, accuracy and completeness of the connection between the content and its code). This is why the mathematical object is so easily identified with its symbol: the manipulation of the mathematical object is not infrequently equivalent to the manipulation of the corresponding symbol and in most types of mathematical operations no need arises to distinguish between them. This explanation, however, does not bring us closer to the understanding of the mode of existence of the mathematical object.

As distinct from the opinions cited above, some mathematicians and philosophers (Hermite's views approximate to theirs) recognise the objective existence of mathematical objects by themselves, irrespective of and prior to their objectification in signs or material things, i.e. as special spiritual entities. The idealistic character of such an interpretation of the objectivity of mathematical constructs is obvious. Western mathematics has not yet disentangled itself from the counterposition of the nominalist and realist approaches the problem of the existence of mathematical objects.

As A. Sukhotin has shown, this alternative is largely artificial and stems from a failure to distinguish between the "inner" and "outer" languages of mathematics (the former is used to describe mathematical objects by themselves, the latter, to describe their relations to the "extramathematical reality"): "The approach to mathematical objects as reality within the framework of the introtheoretical language offers indubitable advantages. By virtue of such understanding objects are posited as tangibles and become easy to manipulate. There is no idealism in it unless we extend claims to something bigger (the solution of 'external' questions), since the adoption of a language is not equivalent to the recognition of ontology."[55]

From the position of dialectical materialism it is not permissible either to ontologise mathematical constructs directly in the manner of Plato and medieval "realists", or to give them a naive-ontological interpretation in the materialist vein ignoring the dialectical character of their reflection of reality. By the mode of their existence mathematical objects as such are phenomena of subjective reality, yet by their "content" they are objective because in the final count they are determined by objective reality; existing in individual consciousness, they possess the status of the phenomena of social consciousness. In this respect we can speak of the existence of mathematical objects, e.g. "point", "number", "function", in the same sense as we speak of the existence of "white", "spring" or "house". These notions existing in thought reflect objective reality with various degrees of abstraction and mediation.

Of course, mathematical objects have their own specificity. According to Leibniz, universal mathematics is, so to speak, a logic of imagination and must concern itself with everything that lends itself to a strict definition in the field of imagination.[56] Mathematical objects are logically well-ordered mental structures or, better put, a kind of representations of certain well-defined intellectual structures[57] which pose as analogues of existing and historically possible real structures, as projects and anticipations of probable quantisation and integration of reality, potentially existing and creatively posited bonds, relations and integralities. Mathematical thought, performing such operations as construction, separation, ordering and integration of abstract relationships, not infrequently outstrips by far the progress of empirically oriented knowledge and its products are generally not intended for direct practical application. That is the reason why mathematical constructs and models may sometimes pass for figments of theoretical imagination and are even described as free creations of the mind.

Indeed, mathematical creation is a vivid example of the activeness of consciousness and, consequently, of the essence of the ideal, as it features a high degree of independence of the immediate empirical givenness. Yet its freedom is relative, being contingent on concrete historical circumstances. It is always determined by economic and socio-cultural conditions as is vouched for by the history of mathematics.[58] It is limited not only by the strict formal criteria and existing mathematical tradition, but even, according to Bourbaki, by common sense. Though the range of creative freedom is not known beforehand, it is not unrestricted. The extension of this range is connected with the realisation of the existing degrees of freedom. Creative freedom is volition with choice intention; it must be realised in order to vindicate itself as freedom, whereas realised freedom is already non-freedom, objectivity, but at the same time a spring-board for a new spurt of subjectivity.* Such is the dialectic of the freedom of creation and its product constituting a highly important aspect of the dialectic of the ideal and the material. The "free creations of the mind" in mathematics do not differ in principle from "free creations" in other spheres of man's spiritual activity. They come into being and exist as any other cultural value.

Bourbaki cite the following opinion of David Gilbert about Cantor's theory of sets: "No one can banish us from the paradise created for us by Cantor".[60] However, this is true of any outstanding spiritual value. Indeed, no one can banish us from the paradise created by Pushkin and Mozart, Leo Tolstoy and Raphael. Yet being in this paradise implies *comprehending the meaning* and getting into the "content", i.e. being able to penetrate the shell of thingness in order to grasp the profound idea enclosed therein. It is ideal by its very essence. Alas, it is not so very seldom that we can see people desirous of self-assertion sacrifice the "content" to its poor shell in the form of creature comforts or tinsels mistaken for signs of importance...

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* "Freedom is always inclined to a dialectical change into its opposite. Very soon it finds itself shackled and submitted to law, rule, necessity, system which, however, do not prevent it from being free."[59]

The question of the existence of mathematical objects is thus a particular case of the problem of the existential status of values. We are faced with a similar problem when we want to comprehend the mode of existence of works of art. A work of art by itself is an objectified result of a creative process. It is, according to M. Markov, a "material link of art"[61]; in order to pose as an artistic value, it must be perceived and deobjectified. "It contains, as a programme, the potential behaviour of the perceiver" (ibid., p. 24) or, put another way, a potential artistic experience having a definite content. This "programme" is, of course, probabilistic and intended only for those who know the "language" of the given art and carry in themselves the "natural codes" of the external artistic objectivity, i.e. those who have become "subjects of interpretation".[62]

Being in itself a material phenomenon, a work of art acquires its true existence only ideally, i.e. in a "subjectivised" form. According to A. Rubtsov, "a work of art functions as such only from the moment it evokes an artistic experience proper and poses as a work of art in full measure only at the peak of this experience".[63]* An aesthetic experience is a method and a result of the deobjectification of a work of art, the crucial moment of the emergence of an artistic value[65]; this is true not only of the perception and "assimilation" of a work of art, but also of its creation.

On this point I wholeheartedly subscribe to Yu. Matjus' sustained critique of R. Ingarden's conception of values. Seeking to substantiate the principle of the objective existence of values, Ingarden "erroneously isolates and counterposes the conditions of the realisation or existence of a value to its essence. Existence is contrasted with essence, whereas the explanation of one presupposes the explanation of the other".[66] As a result, Ingarden is forced to admit the "ideal being of essences" (ibid.), interpreting objectivity as a *natural* property and ignoring the specificity of *social objectivity*. Matjus rightly points out that "value to us is not a material relationship by itself, but only its meaning sensuously experienced by us in communion with it. It is ideal, yet not in the sense of being a substantive essence, but in the sense that it exists in our heads, reflects a certain material connectedness and exists objectively at that. This objectiveness derives, on the one hand, from the fact that we are related to a certain object, a part of the material world, and, on the other hand, from the fact that we ourselves are a product of socio-historical development, whether we are aware of it or not. *Value does not exist apart from people*" (ibid., pp. 170-171). Therefore "it has all the attributes of the ideal" (ibid., p. 171). A similar stand is also maintained by a number of other authors.[67]

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* This viewpoint is sometimes expressed in an extreme form: "...the music, the work of art, is not the collection of noises, it is the tune in the composer's head. The noises made by the performers, and heard by the audience, are not the music at all; they are only means by which the audience, if they listen intelligently (not otherwise), can reconstruct for themselves the imaginary tune that existed in the composer's head."[64]

We now turn to the notion of ideal as a standard of perfection which expresses simultaneously the supreme value and the supreme goal. In this notion we mainly accentuate the axiological and praxiological aspects of the problem of the ideal taken in their unity. Of course, here we also need to look into ontological and espistemological questions, since every ideal necessarily reflects certain properties and trends of objective reality and is based on certain knowledge. Nevertheless, the specificity of the ideal as a standard of perfection consists in that it is closely linked with the notions of excellence, good and the ultimate goal. As has been shown by a number of authors,[68] this *ultimateness* of an ideal is determined by concrete historical conditions. It changes with every new epoch causing the reassessment, elaboration and specification of basic values and goals.

Taken in its abstract form as a special spiritual phenomenon, an ideal may be regarded as the most concentrated expression of the social subject's creative potential; the inner inexhaustible source of his activity is an *orientation towards progressive renovation*, a conscious determination to transcend (on an ideal plane) the bounds of present being, including spiritual being. In this respect an ideal is profoundly dialectical: it posits a boundary to creative freedom, sets the horizon of creative activity, i.e. its possibilities and aims; at the same time it also posits a transgression of this bound, the "pushing forward" of the horizon, the opening up of new possibilities and new higher goals, since extension beyond the limits of any present being is also referrable to the present ideal. The latter always expresses orientation towards the future which is the most longed for and free from the drawbacks of the past and the present (hence the need to consider an ideal from the angle of the dialectic of the present, past and future[69]).

The ideal as a model of perfection is a phenomenon of social consciousness and therefore should be analysed from the two angles indicated earlier: from the angle of its concrete "content" and from the angle of its mode of existence. Like any other phenomenon of social consciousness, it is determined through the category of the ideal only when it is approached on the plane of its mode of existence, its social functions, as a strategic factor of conscious activity, as being immanent in the subject. An ideal, according to A. Yatsenko, "emerges in the subject's head and is therefore subjective, ideal by form; having as its source the objectively existing social relations, it is by its content a result of the subject's creative efforts and contains in an ideal form what is necessary for the subject, what should be rather than what actually is in objective reality".[70]

It is worth noting that Yatsenko's work being cited presents perhaps the most fruitful analysis of the concept of an ideal as a model of perfection that has ever been ventured in Soviet literature. The author concentrates his attention on the epistemological "mechanisms" of the formation of an ideal (similar in many respects to the "mechanisms" of the construction of the ideal object of theoretical knowledge), on the "conditions of the practicability of an ideal", the peculiarities of its emergence at the level of everyday consciousness and at the theoretical and ideological levels, underscores the crucial role of the social ideal in the approach to the problems of the purpose of life and human happiness,* discloses the content of the communist ideal and the dialectical character of its realisation (ibid., pp. 151-172).

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* The extremely topical problem of social ideal and its relation to such burning issues as the purport of life, happiness, the main world-view sets of a person and the ways of his self-realisation has been treated at length on a theoretical level in a number of investigations.[71] Nevertheless, the exploration of these problems, in my view, still fails to meet contemporary requirements.

Yatsenko shows the importance of the specific features of ideals in every form of social consciousness and stresses the need to take due account of the general and particular in the structure of social, ethical, aesthetical and epistemological ideals (ibid., p. 154). It should be noted in this context that the ideals of scientific investigation themselves have come of late under a serious scrutiny.[72] They include the ideals of three categories, those of explanation and description, demonstration and substantiation, and structure or organisation of knowledge.[73] Special interest attaches to the process of emergence and consolidation of the "ideals of scientificity", as it clearly reveals the dialectical interdependence of individual and social consciousness which is crucial for understanding the mode of existence of every ideal.

Being a phenomenon of social consciousness, an ideal can only exist in the minds of a multitude of individuals, i.e. when its "content" penetrates the consciousness of concrete social individuals forming a class, a social group, a scientific community, etc. and becomes part and parcel of their subjective reality determining their convictions, goal-setting principles, world-view and internal motivations. Gripping the minds of the masses, a social ideal becomes a tremendous force. This is, incidentally, the secret of the influence of the communist revolutionary ideal which has turned into a powerful instrument of restructuring the contemporary world.

NOTES TO CHAPTER 7

[1] A. A. Leontyev, "The Sign and Activity", *Voprosy filosofii*, 1975, No. 10, p. 119.

[2] V. G. Afanasyev, *Society: Systemicity, Cognition, and Management*, Moscow, 1981, p. 23 (in Russian).

[3] V. Zh. Kelle, M. Ya. Kovalzon, *Forms of Social Consciousness*, Moscow, 1959, p. 26 (in Russian).

[4] See: G. M. Andreyeva, *Social Psychology*, Moscow, 1980; L. M. Arkhangelsky, *Socio-Ethical Problems of the Theory of Personality*, Moscow, 1974, Chapter 3 (both in Russian); L. I. Bozhovich, "Personality-Forming Stages in Ontogenesis", *Voprosy psikhologii*, 1979, No. 4; L. P. Bueva, "Individual Consciousness and Conditions of Its Formation", *Voprosy filosofii*, 1963, No. 5; B. D. Parygin, *Scientific-Technological Revolution and Personality*, Moscow, 1978 (in Russian).

These basic propositions are underscored by a number of authors. See, for instance, W. Hollitscher, *Der Mensch im Weltbild der Wissenschaft*, Globus Verlag, Vienna, 1969, p. 180; F. Drewitz, P. Hinze, "Apropos of the Notion of Social Consciousness and the Relation of Individual Consciousness to Social", in: *Problems of Philosophy*, Moscow, 1966, p. 409; Yu. K. Pletnikov, *Apropos of the Nature of the Social Form of Movement*, Moscow, 1971, p. 155; A. I. Burdina, *Social Consciousness as a Problem of Dialectical and Historical Materialism*, Moscow, 1979 (all in Russian).

Karl Marx, "The Poverty of Philosophy", in: Karl Marx, Frederick Engels, *Collected Works*, Vol. 6, Progress Publishers, Moscow, 1976, pp. 152-153.

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[10] M. I. Bobneva, *Social Norms and Behavioural Regulation*, Moscow, 1978, p. 54 (in Russian).

[11] O. G. Drobnitsky, *The Notion of Morality*, Moscow, 1974, pp. 132, 246 (in Russian).

[12] V. S. Barulin, "The Role of Categories of Social Being and Social Consciousness in the Categorial System of Historical Materialism", in: *Methodological Problems of Historical Materialism*, Barnaul, 1976.

[13] Idem, "Comments on the Principles of Reflection of Reality in the Categories of Social Being and Social Consciousness", in: *Social Consciousness (Some Theoretical Problems)*, Barnaul, 1975, p. 11.

[14] A. K. Uledov, *The Structure of Social Consciousness*, Moscow, 1968, p. 310 (in Russian).

[15] Karl Marx, "Notes on James Mill's book", *Voprosy filosofii*, 1966, No. 2.

[16] V. I. Lenin, "The Economic Content of Narodism and the Criticism of It in Mr. Struve's Book". *Collected Works*, Vol. 1, Progress Publishers, Moscow, 1977, p. 406.

[17] A. I. Dontsov, "Apropos of the Integrity of the Subject of Group Activity", *Voprosy psikhologii*, 1979, No. 3, p. 28.

[18] G. W. F. Hegel, "Die Philosophie des Geistes", in: *Werke*, Band 10, Frankfurt am Main, Suhrkamp Verlag, 1970, S. 71.

[19] T. I. Oizerman, "Criticism of Bourgeois Conceptions of Man", Conference on the Problem of Man, *Voprosy filosofii*, 1980, No. 7, pp. 101-102.

[20] V. A. Engelhardt, "Science, Technology, Humanism", *Voprosy filosofii*, 1980, No. 7, p. 86.

[21] A. Gelman, V. Ishimov, "The Ethics of Management and Managing Ethics". *Novy mir*, 1981, No. 9, pp. 202-203.

[22] V. Zh. Kelle, M. Ya. Kovalzon, *Forms of Social Consciousness*, p. 27. This basic proposition is underscored by many authors. See,

for instance: L. P. Bueva, "Individual Consciousness and Conditions of Its Formation", *op. cit.*; idem, *Man: Activity and Communication*, Moscow, 1978; W. Hollitscher, *Der Mensch im Weltbild der Wissenschaft*, p. 180.

[23] A. I. Titarenko, *Ethical Progress*, Moscow, 1970, p. 167 (in Russian).

[24] T. S. Lapina, *Ethics of the Social Activity of the Personality*, Moscow, 1974, p. 65 (in Russian).

[25] E. Farkas, "Theoretical Questions of Socialist Ethics", *Filosofskie nauki*, 1975, No. 2, p. 115.

[26] G. D. Bandzeladze, "On the Creative Nature of Morality", *Voprosy filosofii*, 1981, No. 6.

[27] O. N. Krutova, *Man and Morality*, Moscow, 1970, p. 136 (in Russian).

[28] For details see: A. I. Burdina, *Social Consciousness as a Problem of Dialectical and Historical Materialism*, Moscow, 1979, Chapter 5 (in Russian).

[29] E. V. Tarle, "The Babeuf Case. An Essay from the History of France", *From the Literary Heritage of Academician E. V. Tarle*, Moscow, 1981, p. 29 (in Russian).

[30] See, for instance: *Scientific Discovery and Its Perception*, Moscow, 1971 (in Russian).

[31] E. V. Tarle, *Talleyrand*, Moscow, 1957 (in Russian).

[32] M. Polanyi, *Personal Knowledge*, The University of Chicago Press, Chicago, 1958.

[33] H. Brunkhorst, *Praxisbezug und Theoriebildung: Eine Kritik des Modells entsubjektivierter Wissenschaft*, Haag-Herschen, Frankfurt am Main, 1978.

[34] N. S. Yulina, "'Emergentist Realism' of K. Popper versus Reductionist Materialism", *Voprosy filosofii*, 1979, No. 8, p. 103.

[35] M. G. Yaroshevsky, "The Structure of Scientific Activity", *Voprosy filosofii*, 1974, No. 11, pp. 98, 99, 101 et al.

[36] Idem, "Categorial Regulation of Scientific Activity", *Voprosy filosofii*, 1973, No. 11, p. 86.

[37] L. E. Motorina, "The Interconnection of Personal and Suprapersonal Knowledge", *Filosofskie nauki*, 1982, No. 2.

[38] V. P. Tugarinov, *Philosophy of Consciousness*, Moscow, 1971, p. 128 (in Russian).

[39] See: V. S. Semyonov, "Culture and the Development of Man", *Voprosy filosofii*, 1982, No. 4.

[40] Ya. K. Rebane, "The Principle of Social Memory", *Filosofskie nauki*, 1977, No. 5, p. 100.

[41] Ibid., p. 101; see also: idem, "Apropos of Biological Premises of 'Social Memory'", in: *Papers of Tartu University. Philosophy*, XV, 1970 (in Russian).

[42] T. I. Oizerman, "Philosophy in the Aristotelian System", *Vestnik AN SSSR*, 1979, No. 4, p. 119.

[43] *The Works of Plato*. Four volumes complete in one, Tudor Publishing Co., New York, p. 322.

[44] N. I. Styazhkin, "The Problem of the Universals in Medieval Philosophy", *Filosofskie nauki*, 1980, No. 2, p. 113.

[45] T. I. Oizerman, "Philosophy in the Aristotelian System", p. 119.

[46] P. V. Kopnin, *The Idea as a Form of Thinking*, Kiev, 1963 (in Russian).

[47] *The Role of the Category "Idea" in Scientific Cognition*, Alma Ata, 1979 (in Russian).

[48] See, for instance: B. V. Biryukov, "Idealisation", in: *Philosophical Encyclopedia*, Vol. 2, Moscow, 1962; B. S. Gryaznov, "On the Ideal Objects of Scientific Knowledge", in: *Methodological Foundations of Scientific Knowledge*, Part 2, Sverdlovsk, 1973; A. F. Zotov, *The Structure of Scientific Thinking*, Moscow, 1973; S. B. Krymsky, *Scientific Knowledge and the Principles of Its Transformation*, Kiev, 1976 (all in Russian); N. Mikhova, *The Problem of Idealisation and Materialist Dialectic*, Sofia, 1981 (in Bulgarian); A. L. Subbotin, "Idealisation as a Means of Scientific Cognition", in: *Problems of the Logic of Scientific Cognition*, Moscow, 1964 (in Russian).

[49] Frederick Engels, *Dialectics of Nature*, Progress Publishers, Moscow, 1974, p. 229.

[50] A. I. Rakitov, *Philosophical Problems of Science*, Moscow, 1977, pp. 94-95 (in Russian).

[51] V. S. Shvyrev, *The Theoretical and the Empirical in Scientific Cognition*, Moscow, 1978 (in Russian).

[52] S. B. Krymsky, *Scientific Knowledge and the Principles of Its Transformation*, p. 73.

[53] A. F. Zotov, *The Structure of Scientific Thinking*, p. 77.

[54] N. Bourbaki, *Eléments de Mathématique*. Livre I: "Théorie des ensembles", Ch. 4, Hermann, Paris, 1957, p. 88.

[55] A. K. Sukhotin, *Philosophy in Mathematical Cognition*, Tomsk, 1977, p. 37 (in Russian).

[56] Quoted from: N. Bourbaki, "Théorie des ensembles", p. 90.

[57] W. Balzer, "Mathematical Structures as Representations of Intellectual Structures", in: *Dialectica*, Lausanne, 1980, Vol. 34, p. 4.

[58] See, for instance: D. Ya. Stroik, *A Short History of Mathematics*, Moscow, 1964, pp. 5-6 (in Russian).

[59] Thomas Mann, *Doktor Faustus*, Aufbau Verlag, Berlin, 1952, S. 258.

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[60] N. Bourbaki, op. cit., p. 106.

[61] M. E. Markov, *Art as a Process*, Moscow, 1970, p. 10 (in Russian).

[62] A. C. Danto, "Artworks and Real Things", in: *Theoria*, 1973, Vol. 39, pp. 1-17 (C. W. K. Gleerup Lund).

[63] A. V. Rubtsov, "The Work of Art as a Model of 'Completed' Cognition", *Voprosy filosofii*, 1979, No. 10, p. 113.

[64] R. G. Collingwood, *The Principles of Art*, Oxford University Press, New York, 1958, p. 139.

[65] W. Tatarkiewicz, "Przezycie estetyczne: dzieje pojecia", *Studia filozoficzne*, 1973, No. 6.

[66] Yu. I. Matjus, "Apropos of the Problem of the Existence of Values in R. Ingarden's Aesthetics", in: *Papers of Tartu University*. Philosophy, XVII, Tartu, 1974, p. 167.

[67] A. I. Yatsenko, *Goal-Setting and Ideals*, Kiev, 1977, p. 156; W. Tatarkiewicz, *Analysis of Happiness*, Warszawa, The Hague, 1976, pp. 334-335.

[68] E. V. Ilyenkov, "An Ideal", in: Encyclopedia of Philosophy, Vol. 2, Moscow, 1962; A. I. Yatsenko, *Goal-Setting and Ideals*.

[69] N. V. Smirnov, *False Consciousness*, Donetsk, 1968, Chapter 2, §2.

[70] A. I. Yatsenko, *Goal-Setting and Ideals*, p. 155.

[71] See, for instance: O. I. Jioyev, "Apropos of Some Non-Typical Formulations of the Purport of Life in the History of Philosophy", *Voprosy filosofii*, 1981, No. 6; N. Ya. Ivanova, "The Problem of the Meaning of Human Existence", in: *Man and the World of Man*, Kiev, 1977; A. G. Myslivchenko, *Man as the Object of Philosophical Cognition*, Moscow, 1972; W. Tatarkiewicz, *Analysis of Happiness*.

[72] *Ideals and Norms of Scientific Study*, Minsk, 1981.

[73] V. S. Styopin, "Ideals and Norms in the Dynamic of Scientific Quest", in: *Ideals and Norms of Scientific Study*, pp. 18, 19.

Chapter 8.

Social Dialectic of the Ideal and the Material

1. Subjective Reality and Speech

Subjective reality existing only within the framework of the psychic is necessarily connected with definite material processes. The analysis of this connection which constitutes an important aspect of the problem of the ideal calls for investigation into the relationship between the phenomena of subjective reality and speech processes, and this brings us very close to the classical thought-speech and thought-language problems.

It is worth noting that the connection of thinking (and cognitive processes in general) with linguistic structures has been the object of much debate within the so-called postpositivist trend of modern Western philosophy, "scientific materialism" including. Some representatives of this trend vigorously reject the possibility of unmediated knowledge and "prelinguistic thought reality" (i.e. knowledge or thought without verbal form), others no less resolutely take the opposite stand. This controversy, as is known, goes way back into the past and the issue remains disputable not only in the West but also in Soviet literature.[1]

The adherents of postpositivism usually discuss the relationship between thought and language within the conceptual framework of the mind-body (mental-physical, mind-brain) problem. According to Clifford Hooker, one of the most active exponents of the idea of extralinguistic knowledge, linguistic structures belong to a subclass of information structures wherefore it is inadmissible to identify thought with speech. Rightly pointing out a broader character of information structures as compared with linguistic ones and underscoring the importance of this fact to the theory of thinking, he absolutises information structures and tends to treat them in the idealistic manner.[2]

As has already been pointed out, many postpositivists still adhere to the programme of radical physicalism and make attempts to substantiate the principle of the mind-brain identity theory. The most consistent advocates of this principle appear to be the "eliminative materialists" who propose to discard mental terms as unscientific and replace them by precise terms used in neurophysiology. In their view, in order to achieve this aim it is necessary, first of all, to reject the "myth of the Given", i.e. to stop thinking that we possess certain immediate knowledge of our own mental processes (e.g., when I feel pain, the knowledge of this pain is the immediately given which needs no confirmation or refutation and comes to me the moment I start feeling pain).

Perhaps, the strongest objections to the concept of the immediately given are raised by Paul Feyerabend. He contends that the "immediate givenness" is not a fact of nature as it appears to us, but rather "the result of the way in which any kind of knowledge (or opinion) concerning the mind has been incorporated, or is being incorporated, into the language".[3] This alleged fact of nature, in Feyerabend's view, is typical appearance conditioned by the poverty of the content of mental terms as compared with that of physical terms.

According to Feyerabend, it is precisely this poverty of content of the so-called mental terms that accounts for the illusion of their authenticity—i.e., for our alleged ability to acquire secure knowledge of our own states of mind—and rules out the possibility of criticism of such statements as, for instance, "I feel pain", "I am sad", etc. Should we enrich statements expressed in "mental terms" with the results of behavioural and neurophysiological investigations, we shall make them, in Feyerabend's opinion, as accessible to empirical criticism as statements in "physical terms".

Rightly taking exception to the immediately given as the only foundation of our knowledge (i.e. to the basic premise of positivist phenomenalism), Feyerabend however has to pay too dear a price for the elimination of epistemological subjectivism —he is bound to deny the subjectivity of mental experiences and identify the subjective with the intersubjective. Put another way, knowledge in the proper sense of the word is only possible, according to Feyerabend, as something intersubjective, i.e. expressed in language or, more accurately, in terms of natural science, the most adequate of all linguistic forms.

To be sure, the phenomenon of "immediate givenness" deserves careful examination and should not be made a fetish of. Feyerabend is right in insisting that there are no facts absolutely independent of their interpretation, certain peculiarities of our way of building up knowledge, and, consequently, of a certain philosophical theory, a theoretical set. Now this set, Feyerabend notes, may be hidden, masked and therefore tends to create an illusion of the absolute authenticity of the so-called facts of nature. This is precisely how matters stand in the case of the immediately given (ibid., p. 95).

However, Feyerabend carries his conclusions too far—he in fact allows the dependence of human knowledge to become "absolute" and deprives facts of even a shadow of autonomy. It is not difficult to see that the insistence on complete dependence of facts on a theoretical set leads to extreme relativism and completely invalidates empirical knowledge.[4]

If my knowledge of what I am thinking at the moment, for instance, about my mother, cannot be regarded by me as a fact and, consequently, has no status of knowledge, then *human* knowledge is not possible in general and we have no other alternative but to recognise the existence of some superhuman knowledge. In that case the status of knowledge can only be conferred on some *pure intersubjectivity* which has nothing in common with the subjectivity of a real human being.

Besides, given such premises, how valid are Feyerabend's own contentions, logically and conceptually sound as they may be, but nevertheless bound to be influenced by personal aims, intentions, appraisals, emotional experiences, the more so as they bespeak complete confidence in the correctness of his words, i.e. in his thoughts and judgements? Such trust (or, for that matter, complete lack of it) in one's own thought, i.e. a person's knowledge of his assessment of the thought he is having at the moment, as well as his knowledge of his present feeling of pain or sadness, is no less a fact of nature than the ringing of an alarm clock or the green of the leaves of the birch growing under his window. Whatever the theoretical set we may have adopted, the content of the above-indicated facts will surely be invariant within certain limits.

The scope of the present work forbids me to enter into all the details of the complex problem of the relationship between empirical and theoretical knowledge. I shall only state the basic principles of my approach to it and abide by them in subsequent discourse.

Empirical knowledge is relatively independent and cannot be regarded as fully determined by a theoretical set. It is frequently expressed in the common language and must be taken into account in scientific or philosophical investigation, particularly in those cases when we have no profound and well-grounded theoretical explanation of phenomena we are interested in. In this respect the data obtained by self-observation may be as authentic as perceptions of external objects. Indeed, self-observation as "tracking" one's own subjective states is nothing else than a form of man's self-control, and it applies not only to behavioural, but also to cognitive acts. If self-observation is not reliable, self-control is not effective. There are no serious epistemological reasons for depreciating introspective data and regarding them as something utterly unreliable, otherwise we would not be able to trust ourselves, our own perceptions, thoughts and judgements.

The results of self-observation a scientist is concerned with when studying psychic phenomena and speech processes are empirical material which is essentially very similar to the results of conventional observations.

Feyerabend vainly tries to remove the immediately given from the category of knowledge and discard it as a pseudo-fact. Immediate knowledge of our mental states is an incontrovertible fact. It testifies to the reflexivity of a conscious act which always includes awareness of itself. This fact, like any other, can generate a problem field. It needs a theoretical explanation and calls for serious research contrary to Feyerabend's contention that the recognition of immediate givenness leads to irrationalism and contradicts the basic principles of the materialist doctrine.

Feyerabend demonstrates once again that the gimmick offered by coarse physicalist materialism in his person as a solution to the problem of the mind merely eliminates the latter's essential properties instead of explaining them. As we shall now try to show, the problem of the relation between thought and language is treated by eliminative materialism in much the same manner.

It will be noted that the denial of the immediately given is tantamount to a statement that knowledge can only exist in a verbal form. Should immediate givenness be recognised, the problem of its relation to language and speech may have different solutions. Some authors hold that immediate knowledge of one's own mental states is always verbalised in one form or another. This opinion has been voiced by Herbert Feigl who affirms a purely "personal language" whereby the subject expresses such knowledge for himself.[5] Criticising behaviourism, Feigl shows the inadequacy of the reduction of subjective reality to behaviour. An individual's immediate knowledge, his direct experience called by Feigl "raw feels", emerges in the form of a "personal language" translated into intersubjective, common language during intercourse between individuals.

Feigl, however, does not explain how such purely personal language is possible. In this particular case the term "language" obviously loses its conventional meaning and this is bound to lead to a confusion, as the fact of one's awareness and understanding of one's own mental states is by no means equivalent to its linguistic expression; besides, the author leaves us in the dark regarding the signs of the "personal language" and their connection with what they denote, their distinction (if any) from words of the common language, etc. All this makes the statement about every man having his own "personal language" highly debatable.

According to another theory, the immediately given is an entirely new kind of knowledge which always exists in a nonverbal form. The most uncompromising exponents of this view underscore the ineffability of such knowledge which, in their opinion, cannot be adequately expressed in principle or conveyed in words to another person (this view appears to echo Russian poet Tyutchev's rueful remark: "The spoken thought is lie"). Here is a clear gulf between the subjective and the intersubjective, between the inner world of a person and the spiritual life of humanity since the authentic self-expression of a person and mutual understanding become impossible.

The falsity of this viewpoint is obvious, because humanity consists of persons and the results of their creative activity are assimilated by society; even the deepest and most unusual subjective experiences with their subtlest shades can be expressed in the common language. This is borne out by the experience of daily intercourse among people and, in a pure form free from nonlinguistic means of communication, by the works of great writers and poets.

There exists yet a third theory according to which the immediately given is verbalised but partly and its content represents a two-dimensional dynamic structure. The dynamism of this structure consists in the transformation of its unverbalised components into verbalised ones—a process whereby ever new inarticulate layers of consciousness rise, as it were, to a higher level characterised by the *need for* and a *possibility* of adequate verbalisation.

This latter scheme, somewhat simplified for clarity's sake reflects my own point of view on the question under consideration. Before expounding it in more detail, I deem it necessary to underscore that it rejects the gulf between verbalised and nonverbalised knowledge as a matter of principle. I contend that what cannot be expressed in words at a given instant may very well lend itself to verbalisation a moment later (though such a possibility is not always or adequately realised). I therefore hold that *extraverbal thought does exist and is an indispensable component of cognitive processes* (very interesting argument in support of this thesis has been put forward by M. Polanyi[6]).

Let us first clarify some notions. Speaking of thought we mean "living" thought, i.e. an actual experience of a given person within a given interval (in contrast with alienated thought recorded in a text; we deliberately leave aside the fact that reading a text generates "living" thought, etc., i.e. refrain from the analysis of the complete cycle of the individual social information process). "Living" thought, even if it has taken a definite shape as a result of long reflection, is not something rigid and petrified—it is in continuous flux. Verbally informed, "living" thought continues pulsating and ramifying only to be again formalised and again rush forward leaving most of its content behind. "Living" thought is nothing else than *thinking*. "Living" thought or the real process of thinking of a given individual is never abstract. Abstract thought is only possible in a form alienated from man, for instance, in an electronic computer. The real process of thinking as it takes place in the mind of a concrete individual is a complex and dynamic phenomenon with many integrated components: abstract-discursive, sensuous-imaginative, emotional, intuitive. To this should be added goal-setting, volitional and sanctioning factors which are necessarily included in the process of thinking and have so far received very little attention in relevant literature. As is evidenced from the above, the real process of thinking and thinking as the subject of logic, as a logical process, are very different from one another.

Thinking in the sense we are concerned with is one of the important forms of the activeness of consciousness and therefore cannot be adequately described and comprehended outside the conceptual-axiological and structural characteristics of the mind. Being a conscious activity, thinking is closely connected with information processes taking place at the subconscious level. It would be, perhaps, more correct to say that the real process of thinking occurs in a single conscious-unconscious-conscious psychic cycle which should be the object of a special and rather complex investigation. We therefore confine our analysis to the consciousness level including the borderline areas where the light of reflection gradually fades away.

Thinking is an active, purposive and conscious process, and as such is a form of operative consciousness and therefore subject to evaluative regulation (self-regulation). Every conscious process, thinking inclusive, is essentially *communication* since it is dialogic. It stands to reason that communication, and, consequently, thinking, is impossible without language. Yet language, however important and even crucial it may be, is not the only means of communication, which gives grounds for a conclusion that the communicativeness of thinking is not limited to its verbalised form.

For the purpose of our analysis it is important to distinguish between communication with others and communication with oneself, though the unity of these forms of communication, their intimate relationship is indisputable. A characteristic feature of one's communication with oneself consists in that it is introspective and the character of its verbalisation is essentially different from communication with others.

It is noteworthy that communication with others includes the use of numerous means of nonverbal communication (gestures, pauses, rhythm, facial expressions, etc.) which have only recently become the object of special attention.[7] Presumably, the increasing complexity of communication processes raises the importance of these means in interpersonal communication. Anyone knows that an involuntary gesture or a furtive glance may sometimes be more informative than the interlocutor's words.

A glance, a gesture, an intonation are specific *outer codes* of subjective states. As distinct from spoken or written words they represent outer codes of a different type whose deciphering and understanding call for different decoding operations, i.e. transformation into the class of brain neurodynamic codes which represent "open", immediately given information. "Open" information is a phenomenon of subjective reality and its carrier (the code) is a brain neurodynamic system of a special class (such systems may be called "Ego-systems"); this is an *inner code.*

Information is always embodied in its vehicle and, consequently, can only exist in a code form. For this reason the question "How do we understand an outer code (a gesture, a pronounced word, a glance, etc.)?" actually means the following: "How do we effect recoding, i.e. transforming an outer code into an inner code, the brain's 'natural' neurodynamic carrier of 'open' information?" It will be remembered, too, that only a part of inner codes revealing information to an individual have a verbal character and represent the inner speech.

It is not unreasonable to assume that in communication with one's own self characteristic of the process of thinking, the individual also uses various means of nonverbal communication. These "*inner*" *nonverbal means* are evidently represented by at least as great a number of code forms as the nonverbal means of outer, interpersonal communication. They make a subclass of inner codes containing immediately given information (i.e. certain "direct" knowledge) about the individual's present subjective states. Though these states are not verbalised, the individual is aware of them; still, their reflexivity is much less pronounced than at the level of the inner speech.

A synchronic, so to speak, cross section of the consciousness field (moving thought) reveals *two levels of immediate subjective reality: one which has not yet been verbalised, and the other already verbalised* and commonly known as the inner speech; accordingly, there are two types of inner codes. These two levels (types of codes) are interrelated in a rather complex way. I therefore cannot accept the current view that "thinking is a product of speech".[8]

The inner speech is not uniform and also includes different degrees of verbal crystallisation of thought and, consequently, "code transitions",[9] yet it always represents at least a *primary* verbal form which eventually transforms into a more adequate linguistic structure. However, the trend towards a greater adequacy and the corrective impulse originate outside the sphere of the internal speech; they are always rooted, if only partially, in a deeper layer of subjective reality, the birth-place of original thought. *Original thought* is not born in the sphere of inner speech (though the latter may help in its birth-pangs) and "announces" itself before it acquires its primary linguistic form.

This is confirmed by investigation into the process of verbalisation, by the analysis of the creator's mental states and strenuous efforts involved in attempts to express an original thought in words, first for himself, and then for others. The difficulties encountered on this arduous path, the throes of creation are attested almost unanimously by great poets and writers. Recall, for instance, the lament of A. Fet, a famous Russian poet of the 19th century:

> *How poor is the tongue! I try but do not know*
> *How to convey that to a friend or foe*
> *Which sweeps my heart with crystal tide.*
> *Unspoken hearts would pine in vain.*
> *And you the venerable sage would stoop again*
> *To this unfathomable lie.*[10]

The process of expressing a poetic thought demonstrates with special clarity two systems of coordinates of our subjectivity—the verbal and the nonverbal, their unity and diversity, the absence of "isomorphism" between them, the difficulties in passing from one to the other. Here is what Marina Tsvetaeva writes about one of her poetic searches: "I turned the idea this way and that, paraphrased and metaphorised it racking my brains for a heartfelt simplicity. In utter desperation I climbed into bed under my knitted quilt—and lo!—I've got it in a flash:

How void's my heart and stripped,
Its crop is reaped.

"This is an award for my pains. Success, i.e. that which comes to mind at once, is a gift. But this—after all the torture—is an award indeed."[11]

The very search for an adequate expression of a poetic thought testifies to its existence before it is embodied in its authentic verbal form, and this embodiment is accompanied by a feeling of profound satisfaction, of being "awarded". What guides the poet in this painstaking search? What causes him to reject "wrong" words and seek the "right" ones? How does he finally "*get it*" in a flash of insight?

The complex dialectical relationships between artistic thought and its verbal form have been elucidated in a profound analysis by M. Bakhtin who shows, in particular, the process of accommodation of verbal material to the so-called "artistic assignment" intended, as it were, to ensure the consummation of a given cognitive-ethical exertion.[12] "The creative consciousness of a literary artist, he writes, "*never coincides* with linguistic consciousness; the latter is only a moment, the material which is completely under the control of the artistic assignment" (ibid., p. 168).

If we accept the thesis that thought fully coincides with inner speech, we are bound to accept its corollary that the creative search for an adequate verbal form is entirely devoid of thought and that it only arises during verbalisation. But this contradicts not only the available data on the specificity of poetic creativity, but also the everyday facts of intercourse among people. V. Zveghintsev rightly observes that the "primary and the starting point in communication is thought. It always precedes language".[13]

This is also vouched for by investigations into the methods of teaching a foreign language. It has been proved that a complete description of thinking processes necessitates "not only verbal, but also nonverbal codes".[14] "A particular, concrete act of thinking may unfold simultaneously with verbalisation (which is characteristic of man) and without it, in which case it is supported by an image-bearing, graphic or any other nonverbal code" (ibid).

The lack of coincidence of living thought with inner speech, the complexity of the *verbalisation process* are brought out by the latest investigations into the functional asymmetry of the brain and various forms of thought and speech pathology, particularly under the condition of aphasia. Available data on the functional specificity of the right and left cerebral hemispheres attest to a possibility of dissociating the sensory image-related and abstract-symbolic components of the thinking process[15] which is indicative of a relative autonomy of the brain neurodynamic systems (inner codes) responsible for subjective states at the preverbal or extraverbal level. In case of aphasia an object presented to a patient often appears to be "known" to him, yet he is sometimes completely unable to denote it in words; hence, the patient possesses knowledge of a given object and is aware to a certain extent of this knowledge, but his mechanism of verbalisation is out of order. A number of authors have shown that it is precisely the process of integration of thought and word that is disturbed in the case of semantic paraphasia.[16] There is convincing clinical evidence of the relative independence of phonetic and semantic disturbances in the case of sensory aphasia; they give good grounds for a conclusion that there exist extralinguistic factors of control over the speech process.[17]

Similar data have been obtained in psychological investigations of stammering. Basing herself on N. Zhinkin's works, I. Abeleva points out that "inner speech in principle does not need feedback afferent impulses from the speech organs, since the intention is born in the object-image code".[18] In contrast with patients suffering from aphasia, the inner speech of stammerers is completely unaffected.

Pathology demonstrates different variants of the dissociation of internal code dependences which normally represent a unified whole and therefore are "inconspicuous". Such pathological dissociations throw light on the character of the autonomy of one or another internal code. A case is on record, for instance, when a patient developed a stable auditory agnosia after an acute disturbance of cerebral blood circulation and was unable to recognise the hitherto familiar sounds retaining in full his ability to understand speech and showing no other aphasiac or gnostic disorders; this state lasted more than a year and a half.[19] Here is another example, though of a different kind: a pianist developed the Wernicke aphasia accompanied by complete verbal deafness, yet it in no way impaired his ability to play the piano; this shows that a musical experience, the movement of musical thought can be practically independent of verbal structures.[20] Peculiar dissociations of visual-image and verbal structures are registered under stereotaxic effects,[21] in cases of prosopagnosia (inability to recognise familiar faces) when pathological processes hinder the verbalisation of a visual perception,[22] and in other kinds of agnosia.[23]

Hence, data obtained in different fields obviously converge to point to the complex interrelation of the process of thinking and inner speech, verbalised and nonverbalised layers of "living" thought thereby attesting to the existence of but partially reflexive structures of subjective reality which cannot be disregarded in the analysis of operative consciousness.

What I may say then is this. The nonverbalised level of the process of thinking is relatively autonomous. Of course, this level is under a constant and strong influence of the verbalisation process, on the one hand, and well-verbalised and "finished" thought constructs, on the other. This, however, does not change the essence of the matter: extraverbal thought does exist, it is objectified in brain neurodynamic systems (codes of a definite type different from the codes of inner speech) and represents a specific variety and an inseparable component of subjective reality.

2. Interrelation of Material and Spiritual Activity. Activity and Communication

In social processes, in human activity the ideal constantly turns into the material and vice versa. Yet this should give no cause for confusing the categories of the material and the ideal in the analysis of social activity. Such confusion occurs in those cases when the term "ideal" used in a description of activity is interpreted as objective reality or, more often, when it acquires a kind of syncretic meaning and is applied to both objective and subjective reality.

The difficulties involved in demarcating the categories of the material and the ideal in the investigation of human activity derive from the fact that it is *conscious* activity.* Consciousness is the necessary factor of any human activity; attempts to single out purely ideal and purely material components in it not infrequently lead to rather artificial conceptual constructs. Nevertheless, the task of the correct use of the category of the ideal in the description and explanation of social phenomena remains extremely topical, since the dialectic of the ideal and the material obtains only in the processes of human activity and communication. That means that the ideal can only exist in connection with the material, being necessarily mediated by the material and embodied in it. Their organic unity, according to Narsky, can only be disclosed through the category of social practice.[25]

The category of the ideal brings out the social character of consciousness and expresses its creative essence both in the sense that consciousness is a constant movement and transformation of the "content", and in the sense that it poses as a stimulating, goal-setting and control factor of human activity.

Without entering into a special analysis of the category of activity which has been given extensive coverage in Marxist literature,[26] let us consider the relationship between material and spiritual activity from the angle of the problem of the ideal. These kinds of activity which are closely interwoven in actual social processes are usually distinguished by their purposes and social functions, their results and operational features.

Material activity is related to practical matters and effects changes in the objective world of nature, society and human relations. Spiritual activity is related to the intellectual, theoretical and axiological sphere and effects direct changes only in the structure and scope of available knowledge, individuals' intellectual capacities and needs, value orientations and value systems, in programmes of practical activity, in all spheres of social information. To be sure, the making of a machine is different from the creation of a poem or the design of this machine. The results are specific both in terms of their objective embodiment and their social functions, methods of their consumption; the creation of both types of products will also be essentially different from the operational viewpoint.

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* This was highlighted by D. Arefyeva: "In social life it is particularly difficult to distinguish the material and ideal aspects; the line of demarcation here appears to be very flexible since everything in society is a result of human activity and the latter is necessarily guided by consciousness."[24]

However, on the formal side material and spiritual activities have much in common as both follow the same course—from goal-setting through purposive actions to results. Any activity is a process of the realisation of aim as an ideal factor, and the realisation of aim is essentially its *materialisation* in one or another form, i.e. conversion of the ideal into the material, since the subjective reality of an aim, intention, or plan is embodied in things, events, texts, works of art, etc. Characterising material activity, Marx gave a profound analysis of the dialectic of process and result, the mutual penetration and mutual transformation of subjective reality and objective reality. He wrote: "The *form-giving* activity consumes the object and consumes itself, but it consumes the given form of the object only in order to posit it in a new objective form, and it consumes itself only in its subjective form as activity. It consumes the objectivity [das Gegenständliche] of the object—the indifference to form—and the subjectivity [das Subjektive] of the activity; forms the one, materialises the other."[27]

Activity as a "subjectivised process" overcomes itself, as it were, in its product, "dies down" in it and *becomes objectified*. Spiritual activity follows in principle the same path as material activity: the living, subjective content as an urge, as the movement of thought aspiring for its authenticity, as the imagination at play and an inner artistic vision "overcomes" itself in the materialised result, in the common forms of various products of spiritual activity: manuscripts, pictures, printed texts, reels of film, designs, etc.

Hence, the line of demarcation between the material and the ideal is not the same as the line of demarcation between material and spiritual activity, since both include of necessity both the material and the ideal. The goal-setting factors of any activity are always ideal, its results embodied in a socially meaningful form are always material.

In this context I should like to make some comments on M. Kagan's interpretation of certain aspects of the problem of activity. Rightly accentuating communication as a crucial factor of social life, he deems it possible to include it under the head of practical (i.e. material) activity. His argument runs thus: "Communication is *practical* activity, since contacts between people presuppose the embodiment of information in one or another system of signs which materialise and objectify it in order to pass to the recipients. Whatever the character of this information, be it physical like in sports and games, or intellectual like in a friendly talk, the process of its codification and transmission to the addressee (like the process of its reception and decodification) is a kind of practical activity."[28]

In my opinion, it is erroneous to regard communication as material activity only on the grounds that the information being exchanged is embodied in material carriers. Information necessarily exists only in a code form and is therefore always embodied in a *definite* material carrier. Spiritual activity (like any other social process) is transmission, storage and conversion of information, its coding and decoding. Hence, the necessary embodiment of information in signs or any other material vehicles is characteristic of any kind of activity and cannot serve as a criterion for demarcating the material activity from spiritual activity. As has already been indicated earlier (Chapter 6, § 1), the ideal is only characteristic of a special variety of the information process.

It is difficult to agree with Kagan when he counterposes communication as material activity to value orientation as spiritual activity. In his opinion, "a distinguishing feature of communication in the direct sense of the word consists in that information exchange here is an absolutely real interaction brought out in a materialised mechanism of signs, whereas in a value-related contact the relationship between the subject and the object is of a *purely spiritual nature*. A value cannot be seen, heard or touched, it is identified through a direct experience and then through comprehension; it can be described in one or another language, which is done by ideologists or literary artists, but it exists outside and prior to such descriptions. By contrast, communication only occurs when a contact is established between subjects with the help of some language, even a language of glances, and it ceases, terminates as soon as the communication channel is switched off" (ibid., p. 84).

In our view, the author's comparison of communication and value somewhat lacks clarity. If comparison is made between communication and value-related activity, the latter is also necessarily realised in a "materialised mechanism of signs", symbols, bodily changes, actions, etc. If by the "value-related contact" is understood the subject's experience proper caused by some object, in that case, too, we have a definite information process realised through the agency of specific vehicles (a given system of signs, colours, sounds—a corresponding code organisation at the level of receptors, etc. down to the code organisation on the effector plane which, in turn, can be *understood* by another subject if he is capable of decoding it, i.e. converting it into his "natural" code, etc.).

Value does exist outside and prior to its description by ideologists or literary artists, but it does not exist outside the relationships of social subjects to objects and to one another, outside social and information processes; value is a fundamental property of social information. It is therefore impossible to bring out logically the processes that are of a purely spiritual nature by contrasting them to information processes proceeding in sign forms, in the "materialised mechanism of signs" and, consequently, to communication.

I agree with Kagan that "communication can unfold on different levels—*physical* and *psychic*, *material* and *spiritual*" (ibid., p. 85). Yet it must mean that communication is a necessary side of any kind of activity. Hence, communication is not a kind of material activity. Moreover, communication cannot be called a kind of activity in general. It is a fundamental characteristic of any social process, one of the expressions of sociality as such.[29]

The category of communication and the category of activity are, so to speak, equipotential from the conceptual viewpoint, therefore attempts to reduce the former to the latter can hardly be tenable. Like the category of activity, the category of communication represents the necessary side of any social process, yet from a different conceptual angle. It would be wrong, therefore, to regard communication only as a particular case of activity.[30]

I have given so much attention to the relationship between the categories of communication and activity in order to highlight one important aspect of the problem. Just as activity is divided into the material and spiritual kinds (which are, of course, interdependent and interpenetrating), so communication can be also divided into material and spiritual. And similar to the category of activity, the category of communication does not lend itself to division into purely material and purely ideal components. It is also true of spiritual communication (exchange of ideas, opinions, etc.) which necessarily includes material factors and is realised through the agency of language and extralinguistic means of communication. What is known as ideal cannot be separated in time from material processes either in activity or in communication. The ideal is the subjectively real, *internal* side of activity and communication; it differs from their *external*, objectively-real side (sensuously-objective changes, sign conversions, bodily movements, etc.) by a larger conceptual, value-semantic capacity, higher dynamism, far greater number of the degrees of freedom and vectors of volitional activity. On the other hand, it would not be correct to identify the ideal with the "pattern of activity" and lose sight of the specificity of the "ideal transformation of objects" as has been rightly pointed out by A. Bogomolov.[31]

The categories of activity and communication mutually complementing one another give a better insight into the interrelation of the material and the ideal. Yet these categories do not by any means exhaust the multidimensional conceptual continuum that provides the framework for the future-oriented rich dialectic of the material and the ideal unfolding itself in the real historical process, in the perpetual interdependence of the ready-made, already objectified results and the living, *throbbing activeness* still in the process of embodiment and still striving for rest in the tranquillity of completed material forms.

3. The Ideal as an Expression of Man's Capacity for Action. Objectification-Deobjectification Processes and the Structure of the Action Capacity

The social dialectic of the material and the ideal is unfolded as a historical process between two poles: capacity for action or activeness of social individuals (necessarily connected with one another through definite social relations) and objectively real (material) results of their activity. These polarities constantly penetrate and pass into one another, yet only in the sense that an individual's capacity for action, his activeness objectifies itself in a result (becomes a "finished" object or phenomenon), and the latter gets deobjectified and passes into subjectivity thereby sustaining and shaping the individual's capacity for action and merging with it.

However, one should not exaggerate this interpenetration and understate the opposition. Activeness is not and cannot be a "result" at the same time and in the same sense, and vice versa. Taken in their immediate determinateness, activeness and "result" should not be identified and confused. The former is not the latter and vice versa. Therefore the dialectic of the material and the ideal calls for strict delimitation of these categories.

We focus on these well-known propositions merely to underscore that the ideal only exists on the side of activeness and is absent on the side of the "result" taken by itself. Indeed, the "result" can exist apart from its deobjectification and consumption in general.

The ideal does not exist outside human mind, the activeness of a social individual. The ideal is only connected with the processes of objectification and deobjectification posing in these processes as an expression of the essential property of the acting subject, his activeness and his essential capacities in general, and not as a property of an objectively existing thing. The opinion that the ideal is inherent in both the subject and the object, activity and its result, objectification and the objectified derives from an unduly broad interpretation of relativity characteristic of the connection between the material and the ideal; this leads to the obliteration of the crucial logical demarcation between these categories and to abstract identification of the possibility and actuality of the ideal thereby obscuring the true dialectic of transition from the material to the ideal and vice versa.

Just as the purpose, the mental plan is the *ideal in its actuality*, but at the same time the *possibility of the material* (a new object, event), so the social object determined on the side of its content (a social relation, an event) is the material, but at the same time a *possibility of the ideal*. This possibility turns into reality through deobjectification. The specificity of human content present in things has been aptly brought out by A. Yatsenko in these words: "Ideal content flashes up each time only in living and adequate human activity. As soon as activity ceases, the ideal dies down in the object leaving it in the power of its naked thingness only to flash up again in a new process of activity."[32]

The relationship between the natural and the social in products of labour and in human activity in general is one of the key issues in a theoretical inquiry into the dialectic of the material and the ideal. As we have seen, a broad interpretation of the ideal leading to a theoretically inadmissible diffusion of the notions of objective and subjective reality derives from an unduly rigid separation of the natural and the social ruling out any connection between the ideal and the natural, absolutely divorcing them from each other and linking the ideal exclusively to the social. The result is a seemingly logical premise for defining the natural as material and the social as ideal.[33] True, the latter definition is not presented in the form of an explicit statement. Its essence is expressed in an extremely abstract manner watering down the differences between the theses "the ideal is social" and "the social is ideal". Hence, the objective reality of social life is counterposed to the category of the material, and the category of the ideal is construed as social thingness, the objective world of the socium created by human activity. Such an understanding of the categories of the material and the ideal is untenable. The category of the material covers any objective reality, both natural and social. By contrast, the category of the ideal covers any subjective reality irrespective of whether it is conditioned by the contemplation of a starry sky or by the deobjectification of some social thingness. All social objects necessarily have content, yet it gives no grounds for an assertion that they have an "ideal form" of existence. It is equally inadmissible to pass, through minor transformations, from an assertion of the "ideality" of an object by its origin (since it is an embodiment of its purpose, mental plan, etc.) to an assertion that the object is ideal by the form of its social being, and then to deduce from it ideality as a property of the object.

"*Ideality*," writes Ilyenkov, "*is a characteristic of things*, yet not of their natural determinateness, but the determinateness they owe to labour... *The ideal form is the form of the thing* created by social human labour. Or, conversely, the form of labour materialised in natural substance, 'embodied' in it, 'alienated' in it, 'realised' in it and therefore appearing to the creator himself as the form of a thing..." (ibid., p. 157) (italics mine—*D.D.*). It is very difficult to distinguish here the ideal from the material. Very rigid separation of the natural from the social results in the elimination of the boundary between the material and the ideal.

In reality, however, the "form of the thing created by social human labour" and inherent in the thing itself is inseparable from it—it is objective reality and, consequently, a material and not an ideal form. Every thing is material and not ideal not only in its natural, but also in its social determinateness.

All these questions have been discussed in detail by V. Barulin. As a result of a scrupulous analysis of the works of the founders of Marxism, particularly Karl Marx, he defined the range of meanings conveyed in different contexts by the category of the material (in contrast with the category of the ideal). Special attention was paid by the author to the analysis of the relationship between the natural and the social in the products of labour activity. Here are his main conclusions I fully subscribe to: "The embodiment of the ideal in things and objects does not, according to Marx, change their material nature."[34] "Karl Marx admits that the attribute 'material' assigned to a thing, though reflecting its natural being in all its concreteness, is not the only one, universal, and all-embracing. The philosophical characteristic of a thing as objective reality also presupposes a different approach which is intended to reveal the being of the thing that 'has nothing in common with its corporeal reality'. It is the social mode of being, the social being of the thing" (ibid., pp. 25-26; see also pp. 23, 24, 32 and others).

The material in a commodity should not be reduced to its corporeal-natural characteristic alone, otherwise "value contrasted with a natural substance will thereby be counterposed to the material in things and objects. How are we to construe value in that case? As antimatter? Spirit? Idea? Fiction? Of course, not. Yet in order to rule out such a conclusion, it is necessary to admit that value, being an objectively existing phenomenon, is at the same time a modification of the objective reality different from materiality which is embodied in the concrete, natural body of a thing" (ibid., p. 27). Or, expressed another way, value cannot be called ideal as it is objective reality; yet it is social and not merely natural objective reality.

Special clarity on this issue is demanded in the methodology of historical investigation, particularly in the assessment of the nature of historical sources providing information on past events. "The consciousness objectified in a source imparts to it social properties, yet does not turn it into an ideal phenomenon. Always remaining a material formation, a historical source is completely independent of historical consciousness."[35]

In like manner, it would be wrong to ascribe ideality to money, traffic signs, printed texts, tape records, blueprints, reels of film, pictures, TV images, photographs, broadcast speech, grimaces and gesticulation, etc. All those are objective social reality, though produced during conscious activity and intended for its reproduction. Such phenomena and processes of social life are typically material, they are results of the extrapersonal and interpersonal objectification of a definite "content" of the subjective reality of concrete social individuals. They are transformed into ideal phenomena and processes when the "content" embodied in their corporeal, physico-procedural or static form becomes the "content" of the subjective reality of concrete social individuals.

Such unceasing metamorphosis represents the most essential characteristic of social life. The category of the ideal brings out here three closely connected manifestations of the social individual's activeness: first, *the objectification intention* (objectification being understood broadly as any external objectification—in a word, a gesture, a labour process, etc.); second, *the deobjectification intention* (deobjectification being also understood in a broad sense as any subjectification of the external—a sense image of an object, the comprehension of the design of a machine or the functional purpose of a thing, the comprehension of the meaning of a scientific text, a historical source, a work of art, the deciphering of a secret code, etc.); third, *the intention of the self-movement of "content" in the sphere of subjective reality* (including various kinds of such self-movement normally not manifested—ranging from languorous dream and quietly floating reminiscences to intent concentration and hard mental strain in persistent attempts to sort out and assess mixed impressions of some complex event, from a casual inner dialogue with one's own self and with others, an unhurried mental survey of everyday things to be done to a vortex of images and ideas in an emergency situation and a creative inspiration bringing forth a new idea, a quick chain reaction of captivating thoughts suddenly opening up new dimensions of the internal or external world).

These three kinds of intention expressing various aspects, various manifestations of man's capacity for activity represent a unity and are often realised simultaneously (exhibiting different degrees of intensity). That does not mean, however, that we should ignore their specificity, certain independence, since in a given time interval one of them may prevail over the others or even suppress them. This applies primarily to the intention of the self-movement of "content" in the sphere of subjective reality (henceforth "intention of self-movement": clumsy and cumbersome as it is, this expression conveys the necessary meaning and is important for the purpose of our analysis).

The intention of self-movement is central to the structure of the action capacity integrating the opposite intentions of objectification and deobjectification. When it is dominant, the other intentions may be, so to speak, considerably curtailed. As compared with them, it has a much larger number of the degrees of freedom. This needs some clarification.

The intention of objectification is set by the purpose (immediate motive) which has already taken shape in the person's mind. Though the realisation of this intention is not invariant as it always has a number of options open to it, still the range of such options and the means of objectification are limited by the definiteness of the purpose. The deobjectification intention is set by the existing object. The realisation of this intention also varies within a broad range of options, since the content of the object is, as a rule, multidimensional, not to speak of the subject's psychological sets expressed, though not always fully, in the given intention. Here we also have a range of options, but it is limited in one way or another by the objective definiteness of the external object. Both these intentions are unidirectional, oriented on a set result and represent a sole vector determining the chain of actual options.

The case with the intention of self-movement is somewhat different. This intention is not restrained by the immediate orientation towards external objectification, nor by the external object which is to be deobjectified. That means that it need not necessarily contain a concrete purpose and may only carry in itself an *abstract aim*, i.e. a possibility of multidirectional vectors. Some of them are similar to the objectification and deobjectification vectors, but have a peculiar feature of internal self-expression and self-comprehension. The intention of self-movement presupposes the highest degree of freedom in changing the content of subjective reality. In many intervals it has no set result and is only characterised by a tendency towards the convergence of different vectors. It is precisely this kind of indeterminateness that harbours a possibility of creative transformations and new formations. Having arisen and taken shape, this new internal content is capable of elevating the objectification (or deobjectification) intention to a dominant position.

By virtue of the above indicated features the intention of self-movement represents the most active side in the dynamic structure of the individual's capacity for action. Of course, the objectification and deobjectification vectors are constantly reflected in it, penetrate into it, sustain and shape it, but never subordinate it completely, since the sphere of subjective reality always has such strata or levels where changes in content occur relatively independently, i.e. are not controlled directly by the present intentions of objectification and deobjectification. It therefore represents the individual's ability for creation as the core of his action capacity.

In the same sense we can say that the intention of self-movement makes the core of the ideal, as it represents with the greatest possible fullness its specific features: the unity of reflection and creative urge, the freedom of transformation of the internal content, the possibility of disregarding the burden of existing reality and existing knowledge and values in the name of future reality, deeper knowledge and higher values.

In view of the above I cannot accept the interpretation of the ideal as a "form of a thing", as what is contained in "ready-made" things, social links, in what has already been objectified and alienated from living human consciousness. The ideal only exists as the actual active capacity of social individuals. Outside this capacity there is only the objective reality of corporeal forms, things, signs. What is more, a large part of the immense number of things and texts lie dormant and are not deobjectified. They are at best the archives of civilisation, at worst, its rubbish heap.

Mankind is incessantly setting up new and new storeys of an enormous edifice of materiality. The huge and ever growing mass of things is devoid of any human sense, some of them remain desolate throughout their long corporeal lifetime. Here we are faced with new, very topical aspects of the problem of the ideal (and, consequently, of the ideal-material dialectic). What is deobjectified and *for what purpose*? What is not deobjectified and *why*? *Why* is humanity turning out an endless line of dreary cheerless objects, unneeded and forsaken by man from their birth?

An article which has quickly gone out of fashion and is no longer needed, a book once leafed through by few and never read by anyone (and not infrequently published in many copies and then gathering dust in bookshops) represent one of the aspects of the problem of non-objectification. Some objects are barred from social life, expelled from the sphere of human activity by virtue of the evanescence, insignificance, obscurity of their content, or due to the reverses of fortune. Other objects may live for a while in the active sphere, are deobjectified by many and then also drop out still in "young age" adding to the dead weight of the object world. Most objects have a short social life, much shorter than their physical existence.

Only a comparatively small number of objects are socially active as long as they preserve their material form (masterpieces of painting, sculpture, architecture and applied art often living in people's memory even after their physical death, most buildings, some technical installations, as well as a number of other objects difficult to classify and distinguished by special usefulness, value, importance of their content and the like). The term "ideal" can only be applied to socially functional objects, i.e. those belonging to the sphere of human activity (communication).

And it is only in their communion with the ideal, posing in the deobjectified form, i.e. as a content of subjective reality, that they can perform their social function and play their part in dynamic human activity.

Another side of the problem of non-objectification is connected with the avalanche-like growth of socially functional objectification, with the difficulties in effective consumption, deobjectification, brought about by the extremely rapid expansion of socially-objectified information. Illustrative of this process is the rate of growth of the number of scientific publications reflecting the advance of contemporary science. Using conventional methods, today's researcher is already unable to keep abreast of the latest achievements in his field by reading all relevant literature; it lowers his efficiency as a specialist and acts as a brake on the progress of scientific knowledge. An objectified result of cognitive activity remains a useless scrap of paper if it fails to be timely deobjectified and does not enter into the content of the subjective reality of definite social individuals. Hence, society is now faced with the task of developing new forms of objectification of scientific information, new means of introscientific communication capable of ensuring timely and effective introduction of new information into the sphere of "living" consciousness which alone is its true destination. Hopes in this field are mainly set on computers as a means of storage, systematisation and delivery of necessary data, though they can hardly be expected to provide a radical solution to the problem.

The gap between the information stored in social memory and its use in actual conscious activity creates yet another important aspect of the problem of the ideal. The analysis of this aspect clearly brings out the specificity of this problem as compared with the problem of consciousness taken in broad perspective. The latter calls for investigation not only of the objectification-deobjectification processes and creative activity, but also of the entire field of social materiality as the storage of the content of consciousness, its materialised history, as the basis of its creative possibilities and as an expression of its essentially social nature.

4. The Category of the Ideal and the "Personal Aspect" of Social Consciousness and Social Activity

I should like to start with a few critical comments on the interpretation of those methods of the investigation of social consciousness which are limited to the analysis of the "finished" object and sign forms with due regard for their genesis, social significance and functioning. Such methods used in combination represent a single approach which, according to M. Mamardashvili, "might be called an impersonal (or reductive-objective) analysis of consciousness and culture".[36] In his widely discussed essay containing a number of profound ideas and generalisations, the author contends that this approach was first developed by Karl Marx and used by him in the analysis of "converted forms of consciousness" in order to disclose the real meaning of "ideological systematisations", "secondary formations of consciousness" distorting and obscuring real social relations (ibid., pp. 23-25).

Indeed, the reductive-objective method of the investigation of consciousness occupies an important place in the system of cognitive means of historical materialism. It permits disclosing the focal historical points in the determination of the content of social consciousness by social being, objective social relations (present or past). It opens the possibility of restructuring the already non-reflexible "primary formations of consciousness" and makes it possible to restore and link the main stages of the reflective process thereby providing a sustained materialist account of the "converted forms of consciousness". However, it is but one of the methods of the investigation of consciousness.

My objections are as follows. Mamardashvili's essay creates an impression that the approach of Marx to the problem of consciousness boils down to the "impersonal", "reductive-objective" method and that this method constitutes the essence of the *philosophical* approach to the investigation of consciousness. This impression arises for the simple reason that the author does not say a word about the possibility and necessity of using a *person-oriented* method of investigation precisely as a philosophical one and never mentions any other method of the analysis of consciousness in Marx except the "impersonal" and "reductive-objective".

This tendency to exclude the personal aspect of the problem of consciousness from the province of philosophy and assign it to the department of psychology is not uncommon in our literature. It derives from the understanding of the ideal as a property of social objectivity, "finished" products of spiritual activity.[37] In this approach the living creating individuals completely evaporate, as it were, and their historical value and originality turn out to be nothing more than a ghostly epiphenomenon of the abstract mechanics of object-event structures.

As has been repeatedly indicated earlier, Marx (and, for that matter, all classics of Marxism) used the impersonal and personal approaches to the problem of consciousness in a dialectical unity. Marx consistently opposed the divorce between man's individual and species existence and warned against postulating society as an abstraction vis-à-vis the individual.[38] The reductive-objective analysis therefore has its limits, it registers what *has already come into being* and reveals the social in its pure form, leaving aside the individual in the social and ignoring what *is only coming into being*, the projection into the future. Understandably, in many cognitive tasks it should be supplemented with the personal approach accentuating none other than the existential-historical and procedural-creative aspects of conscious activity. The personal approach focuses on the analysis of the dynamic of the axiological-semantic structure of subjective reality (i.e. on the individual's social "content", the socially significant as the personally significant and its creative transformations related to the *future* socially significant).[39]

In this field, according to E. Solovyov, we need "a high culture of situational-historical analysis",[40] a biographical approach, the revelation of the "capacity for the adequate *interiorisation* of cultural-historical conflicts and their subsequent *passively-creative* resolution. This moment is extremely important in the analysis of any spiritual creative process".[41]

The absolutisation of the reductive-objective (impersonal) approach to the problem of consciousness leads to oversimplified models of spiritual activity and culture.* In such models any new spiritual formation looks like a result of rigid single-value determination and real historicity appears as an implicitly algorythmic process. This kind of absolutisation is largely a natural corollary of the concept of the ideal criticised earlier. This concept fosters extreme schematism of historical description reducing it to a mere chain of events and assigning the history-making individuals the role of either dummies skilfully modelled and intended to illustrate (not create) historical events, or of interchangeable ghosts hardly discernible on the canvas of events.

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* As Yu. Davydov has justly observed, culture should be regarded as a "dialectically contradictory unity of the individual and the socium".[42] This is a crucial methodological principle of its investigation.

The concept of the ideal propounded in this work and understood as a capacity for action of social individuals provides a guideline for the further development of such methodological principles and conceptual means that would promote further investigation into man's conscious activity—an inseparable unity of the social and the existential, the actual and the possible, the present and the creatively constructed future. The result will be a better understanding of every socio-historical process which casts off, as it were, all dead shells of the "finished" objects, communication structures and events, leaving them in the past and *ceaselessly* moving forward, an eternal "becoming", an endless future-oriented progress of humanity. The dependence of this process on its objectified results, on what has already come into being, is not a single-value predetermination. It is to a great extent only probabilistic. But then the already existent, the objectified, is not fully determined either. It is a product of the past historical process and its comprehension involves the restructuring of the previous man-inspired movement. There is no becoming, no socio-historical process without its creators, living human beings.

Hence the imperative need to combine the reductive-objective analysis with the personal approach, to exercise special attention to the methodology of investigation into the dynamic structure of subjective reality. Here we have, perhaps, the least explored area of the social dialectic of the material and the ideal.

V. Kelle and M. Kovalzon have convincingly showed that the historical process should be investigated on three interdependent planes: "natural-historical, operational and humanistic (personal).[43] The absolutisation of any of them and disregard of others inevitably leads to a deviation from the principles of the dialectical methodology of historical materialism (ibid., p. 286). Underscoring the importance of the natural-historical aspect of the investigation (objective systems approach), the authors make a resolute stand against "vulgar sociologism", against the "objectivistic description of history", since from the Marxist point of view history is the "*conscious realisation of human potentials in the historical process which thereby acquires a humanistic character*" (ibid., pp. 285-286).

The concept of the ideal as an expression of man's capacity for action constitutes one of the necessary methodological principles demanding of the investigator to focus his attention on the process of *becoming*, on the historical development understood as the activity of living human beings. It applies not only to the emergence of new things, new social relations and events, but also to the emergence of new knowledge and new values.

If socio-historical phenomena are seen in retrospect, what has come into being must be "projected" as what is becoming. Wherever possible and feasible, analysis should be brought to the level of the creating individual who transforms, first on an ideal plane, then practically, all aspects of social life (things, communication structures, events).

History, according to Marx, is made by real men and they should be described "as both the authors and the actors of their own drama".[44]

This kind of analysis has demonstrated its great merits in a number of historiographic and culturological investigations revealing the emergence of new social formations from two interrelated standpoints: as the shaping of persons by objective social relations and events and as the shaping of these relations and events by the persons' activity.[45]

It is only in this two-dimensional analysis that the investigator can disclose the profound social dialectic of the material and the ideal and penetrate the processes of concrete historical transformations of the ideal into the material and vice versa interdependent like inhalation and exhalation and representing the constantly throbbing pulse of social life.

The category of the ideal thus denotes the fundamental property of man's capacity for action, the crucial feature of the manifestation of his "essential powers". This characteristic of the category of the ideal reveals itself in the analysis of the *historical* perspective of the social dialectic of the material and the ideal, when the essential power vectors are closed only in the future, beyond the horizon of the present materiality and present events. Historical development opens up a broad panorama of new possibilities and new manifestations of the "essential powers" pushing forward, as it were, the horizon of present social being further into the realm of the ideal as the project of the future, as its mental image, hope, prevision and anticipation.

The social dialectic of the material and the ideal rules out the interpretation of the ideal as existing outside the material, as the realm of spirit, i.e. its idealistic and dualistic conceptions. Yet it is also incompatible with the vulgar-materialist interpretations of the ideal giving but an illusion of conceptual comfort based on a gross oversimplification of patterns of conscious activity, coarse identification of the ideal with the material, and actual elimination of the category of the ideal together with the vital problems of man's conscious self-realisation—*the purpose of human creative activity and the creation of human purpose.*

The indissoluble unity of the ideal and the material, the mutual transition of the material and the ideal represent a theoretical expression of one of the strategic aspects of social life created by conscious activity of people. The indispensable prerequisite for a profound and sustained analysis of the social dialectic of the material and the ideal is a clear logical correlation of these two fundamental categories preserving in all contexts of such analysis the necessary measure of their logical contrariety which prevents quasidialectical looseness in their manipulation and a diffusion of their content. This diffusion, rather common in present-day publications, impairs the determinateness of the category of the ideal and inevitably leads to conceptual aberrations and attempts to skirt controversial issues and side-step the arising difficulties. The result is theoretical vagueness and "diplomatic evasiveness" in proposed solutions.

The category of the ideal must retain its fundamental meaning of subjective reality in all theoretical contexts. It is this specific content of the category of the ideal that expresses the distinguishing features of human consciousness as actual spiritual activity and as the individual's unique inner world, the distinguishing features of the conscious reflection and transformation of the external world and conscious activity itself. The category of the ideal reflects the free movement of the content of subjective reality when the capacity for action is still effective, when action has not yet died down in the form of external objectification; in the process of such objectification the freedom of this movement gradually wanes and completely subsides in the "finished" object; together with it fades away the ideal, as it evolves into the material shackled in its object form and incorporated into the system of objective ties and relationships of the material world.

The category of the ideal denotes the possibility of reconstructions and new formations in the sphere of subjective reality free from the physical, spatio-temporal and informational determinateness of the existing world of objects: indeed, in our imagination, daring thought, dreams and hopes we are capable of overstepping its bounds and manipulating it at will. What does it matter if this freedom of our Ego, wanton, arrogant and hypocritical with itself as it may be, brings forth chimeras, castles in the air, comforting illusions, false beliefs and maniacal ideas? Even if this subjective wantonness only occasionally has a flash of insight or runs across a true value, just the same it represents the essence of the restless creative human spirit, eternally seeking truth, beauty, goodness, justice and excellence (this latter feature provides a logical link from the ideal to an ideal as a model of perfection).

In all the above indicated aspects of its content the category of the ideal is logically opposed to the category of the material, yet it gives no cause for divorcing ideality from materiality and placing the former in the primordial realm of spirit after the manner of Plato or Hegel. What this opposition does imply is the need to penetrate deeper the specificity of the conscious creative activity of man as the primary source of all historical changes in order to get a more profound understanding of the objective reality of social processes and social life in general embodying the conscious and responsible activity of every individual and mankind as a whole.

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